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CONFERENCE AT ST. JOSEPH, MISSOURI ON INTERSTATE POLLUTION IN THE MISSOURI RIVER

Public Health Service
Washington, D. C.

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CONFERENCE AT ST. JOSEPH, MISSOURI
On Interstate Pollution in the Missouri River

Council Chambers
301 City Hall
St. Joseph, Missouri

June 11, 1957

Chairman: Mr. Murray Stein
Chief of Enforcement Section
Water Pollution Control Program
U. S. Public Health Service
Washington 25, D. C.

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APPEARANCES

Mr. Glen J. Hopkins
Regional Engineer, Region VI
U. S. Public Health Service
Kansas City 6, Missouri

Mr. Leonard Dworsky
Asst. Regional Engineer, Region VI
U. S. Public Health Service
Kansas City 6, Missouri

Missouri:

Mr. Albert W. Happy
Chief Engineer
State Division of Health
Jefferson City, Missouri

Mr. Jack Smith
Water Pollution Control Program
State Division of Health
Jefferson City, Missouri

Mr. Clifford Summers
State Division of Health
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General publications
M690/9 Conference at St. Joseph, Missouri on Interstate pollution in the Missouri River. June 11, 1957 (PHS. Division of Water Pollution Control Program)

APPEARANCES (Continued)

Kansas:

Mr. Dwight Metzler
Chief Engineer
State Board of Health
Topeka, Kansas

City of St. Joseph:

Mayor Stanley Dale

Mr. James Welsh, President
Mr. John Beaumont
Mr. John Rupp
Members of the Common Council

Mr. Walter Welsh, City Clerk
Mr. Martin Ericson, Director of Sanitation
Mr. Harry W. Kurtz, President Board of Public Works
Mr. Glen Riddle, City Engineer
Mr. Robert Brown, Engineer, Black & Veatch

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CHAIRMAN STEIN: May I have your attention? I should like to open the Conference in the matter of interstate pollution of waters of the Missouri River involving the states of Missouri and Kansas, with particular emphasis on discharges caused by St. Joseph, Missouri, and its associated stockyard district.

Now, the conferences generally are rather informal and because of the heat, and so none will be inhibited, I will take off my coat and I suggest those who wish may do likewise.

Before we start, I should like to introduce the conferees here. First we have Mr. Glen Hopkins, Regional Engineer of the Public Health Service, Mr. Dwight Metzler of Kansas, and Mr. Albert Happy of Missouri.

We also have Dr. Lewis Hoyle, Regional Medical Director of the Public Health Service, here in the audience with us today.

This Conference is held under the Federal Water Pollution Control Act and the Conference was called by the Surgeon General of the Public Health Service. The purpose of a conference of this type is to bring the states, other interested parties, and the Public Health Service together to lay a basis for future action by all parties concerned and to give the states and localities an opportunity to take any remedial action which may be indicated under state and local law. Now, in accordance with the Federal Act, the Surgeon General has notified the official state agencies concerned, that is the State Board of Health of Kansas and the Division of Health of Missouri.

In interstate pollution problems both the states and the Federal Government have responsibilities. However, the Federal law recognizes that the states have the primary rights and responsibilities for taking action to abate pollution,

including interstate pollution. And that is the philosophy of operation of the Federal program, recognizing the primary rights and responsibilities of the states in this area.

The Federal law also recognizes that it is the function of the Public Health Service to encourage the states in these activities. However, this does not mean that the Public Health Service is not also required to exercise its responsibilities as outlined by Federal law in the field of interstate pollution control.

In a conference of this sort, under the Federal Act the Public Health Service has certain functions, and one of their basic functions is to provide a summary of the conference, which we will send to the conferees some time subsequent to the conclusion of the conference. This summary must include, according to law:

One, the occurrence of pollution of interstate waters subject to abatement under the Federal Act. The Federal Act provides that pollution of interstate water which endangers the health or welfare of persons in a state other than that one in which the discharge originates is subject to abatement.

Secondly, the summary must cover the adequacy of measures taken toward abatement of the pollution.

and, third, the nature of delays, if any, being encountered in abating such pollution.

In addition, the purpose of the conference will be to establish a time schedule for such remedial action as is indicated.

I would like to at this time indicate just a bit what our procedure in the conference will be. First, as an aid to developing the summary, we are having a stenographic transcript of the conference made. Secondly, we will attempt to call upon the Public Health Service and the states concerned for statements. The conferees, that is the official state water pollution control agencies, represented by Mr. Happy and Mr. Metzler, will also have an opportunity to call upon other people they wish to make statements. At the conclusion of any particular statement the conferees will have an opportunity to ask the person making such statements questions and to make any comments. In that manner we will proceed on with the various statements and through the various phases of the conference.

First I should like to call upon Mr. Glen J. Hopkins, the Regional Engineer of the Public Health Service regional office to give a general presentation of the interstate pollution problem of this area.

Mr. Hopkins, before you begin may I make one other suggestion. We have a rather large room. I wish the folks who come up to speak will speak out to the best of their ability. We also have a yellow sheet of legal foolscap paper here and we would prefer any person who is going to participate and make a statement to sign in, giving his name, title and organization.

Mr. Hopkins.

MR. HOPKINS: Mr. Chairman, Mr. Mayor, gentlemen.

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In the basin of the nation's longest river, the Missouri, there is in progress a vast water and land resources development program. It is the largest undertaking of its kind in history, involving one-sixth of the nation's land area. The multibillion dollar plan for controlling and using its waters is already yielding benefits for flood control, municipal and industrial water supply, irrigation, electric power, soil conservation, and navigation. Important gains, with greater future potential, have been made in the development of fish and wildlife, recreation, forest and mineral resources, and business and industrial growth.

The control of water pollution is an important and critical part of the development program. The value of the basin's water resources not only depends upon having the water available where it is needed, when needed, but also on its degree of cleanliness. The key to complete realization of the basin's potential depends upon the ability of its people to control water pollution. Clean waters will protect advances already achieved and open a wide field of resources that are virtually untouched.

In the river stretch from Yankton, South Dakota, to St. Louis, Missouri, some 1,800,000 people use the Missouri River as a source of drinking water. Each day 250,000,000 gallons of Missouri River water are used in the homes of these people. With population growth, problems of water supply and pollution control increase.

Recreational opportunities become increasingly important with population growth. Development of recreational facilities for campers, fishermen, swimmers, boaters, and sightseers can be accomplished since the Missouri has become a controlled river; however, realization depends upon pollution being controlled.

The basin's economy is predominantly agricultural. Strong industrial complexes are located near metropolitan areas. St. Joseph, situated toward the eastern boundary of the region, is an important center of the region's 8,000,000 population. The proximity of the Missouri River is a principal reason for industries establishing plants in the metropolitan area.

Control of water pollution in the Missouri Basin is not an isolated operation. It is part of an over-all water development plan which, to date, has cost three billion dollars. It is an integral part of a great venture to conserve a valuable and irreplaceable natural resource.

Thus, complete development of the Missouri cannot be realized until pollution contributed by communities and industries along its banks is controlled. Because of the interstate nature of the Missouri River, numerous studies and reports have been made over an extended period by the States and Federal Government. Their purpose has been to point out the problem and prepare for remedial action.

The interstate effects of pollution in the Missouri River were identified as early as May 1913 in a report, "Sewage Pollution of Interstate and International Waters--The Missouri River from Sioux City to Its Mouth," by Dr. Allan J. McLaughlin, published as Hygienic Laboratory Bulletin No. 89. Through the years 1913 to 1948 the Lower Missouri River remained a concern of health officials of the States as well as of the Federal Government.

In 1948 the Congress, cognizant of the health and welfare problems created by increasing pollution of the nation's waterways, established a cooperative

pollution control program between State water pollution control agencies and the Public Health Service. Under this program the Public Health Service Regional Office VI, Kansas City, Missouri, and the five states in the Lower Missouri--South Dakota, Iowa, Nebraska, Kansas, and Missouri--cooperated in extensive investigations and reports of pollution conditions in the Missouri River from the Niobrara River, South Dakota, to St. Louis, Missouri. A report, entitled "Lower Missouri River Basin, Water Pollution Investigation, October 1952," Public Health Service Publication No. 269, outlined the pollution problem and suggested courses of action for cities, states, industries, and others, to control this longstanding situation.

This report showed that untreated wastes were discharged to the river by St. Joseph, Missouri, and Atchison, Leavenworth, and Kansas City, Kansas. Major industries at St. Joseph, such as the Anchor Serum Company, Armour & Company, Consumers Co-op, and Swift & Company, discharged raw wastes to the Missouri River primarily through the St. Joseph Municipal sewer system.

In July 1953 the Surgeon General of the Public Health Service, under authority of the Federal Water Pollution Control Act, formally adopted a "Comprehensive Program for Control of Water Pollution - Missouri Drainage Basin," Public Health Service Publication No. 317. The report, a joint effort of the ten basin states and the Public Health Service, noted the interstate nature of pollution along the main stem of the Missouri River and recommended treatment of wastes at St. Joseph, Missouri, and other communities and industries discharging to the main stem. In adopting this comprehensive program, the Surgeon General stated, and I quote:

". . . The program is sound and gives full consideration to the several present uses and to the reasonably-anticipated future uses of the waters of the Missouri River Basin. It provides an equitable balance in the pollution control requirements for various private and public groups concerned. . . .

"Obviously the mere adoption of this program will not, in itself, reduce pollution or improve the usefulness of the waters in the Missouri River Basin. It does provide to the citizens of the area and to the city officials and industrial leaders, farmers, fishermen, conservationists, and others an objective plan based on good engineering practices and reflecting sound economics. It is a plan which the public can support, and must support, if progress is to be made in the abatement of pollution."

A report, "Evaluation of Interstate Pollution, Lower Missouri Sub-Basin, State of Missouri," was prepared by the Public Health Service and approved by the State water pollution control agencies of Kansas and Missouri in August 1953. The purpose of this report was to provide a common basis of understanding between the States and Federal Government on factors relating to the pollution problem in the Lower Missouri River. Those responsible for discharging untreated municipal and industrial wastes in the St. Joseph area were cited, and the Missouri Division of Health was asked by the Chief, Division of Water Pollution Control, Public Health Service, in a letter dated February 26, 1954, to take all possible action to secure abatement of pollution originating in Missouri.

Following a series of meetings between the five States in the Lower Missouri Basin and the Public Health Service, a "Uniform State Program," outlining steps to abate interstate pollution, was adopted by the States in November 1953. Statements on progress toward abatement have since been submitted by the

States to the Public Health Service. To date, St. Joseph has employed consulting engineers to study and propose methods for solving its pollution problem.

While the pollution contributed by St. Joseph and the other cities, towns, and industries below it are of immediate concern, related pollution placed into the river from communities and industries above St. Joseph result in residual pollution immediately above St. Joseph. These sources of pollution, added to that coming from St. Joseph and below, constitute the total volume of pollution affecting the health and welfare of people in the Lower Missouri River. The related sources of pollution include wastes from Carter Lake and Council Bluffs, Iowa, and Blair, Bellevue, Nebraska City, Omaha, and Plattsmouth, Nebraska.

Next I would like to present a series of charts which will indicate some of the more important aspects of the pollution problem and show a number of findings of our several surveys.

Chart No. 1. This map outlines a few of the major projects in the Missouri River Basin Development Program, which, together with the program for pollution control, forms the over-all plan aimed at conserving the basin's water resources. The flood control, hydroelectric power, irrigation, and navigation phases are aimed at helping the area and its inhabitants achieve greater economic security; to stabilize the economy against recurring drought; and to stimulate the further development of the basin to keep pace with national growth.

St. Joseph, as a part of the area involved, shares in these benefits. The blue line on the chart is that reach of the river which is being regulated for navigation. Upstream from the blue line are the several reservoirs, either existing or under construction, through which the river is regulated. The black circles or segments of circles indicate the several sources of municipal and industrial pollution mentioned in my presentation, with the area of the circle indicating the relative magnitude of those discharges.

The second chart shows four graphs indicating the average monthly density of coliform bacteria during the two-year period 1955 and 1956 at the municipal water intakes at Omaha, Nebraska, Council Bluffs, Iowa, St. Joseph, Missouri, and Kansas City, Kansas.

Coliform bacteria serve as indicators of pollution. A coliform density of 5,000 organisms per 100 milliliters up to 10,000 organisms per 100 milliliters is generally considered the maximum permissible to produce a healthful water supply using reasonable and economical water treatment methods. While water treatment plants can, and do, treat waters containing greater quantities of coliform bacteria, the absence of disease should not create a false sense of safety about the quality of the Missouri River as a source of supply. Dependence must not be placed solely upon water treatment processes, and particularly chlorination, to produce a safe water supply from a highly polluted source. Human errors in operation, mechanical failures, or disaster conditions can result in serious illness by allowing polluted water to break through the barrier of water treatment.

For reasonable conditions, the Public Health Service recommends that coliform levels be not in excess of 5,000 per 100 milliliters, and that not more than 5 percent of samples taken exceed 20,000 coliform bacteria per 100 milliliter.

These four graphs indicate that pollution has greatly exceeded these tolerances at both the St. Joseph water supply intake and the Kansas City, Kansas, water supply intake. Bacteriological pollution was usually most critical during the summer period. It should be noted that during no month did average coliform densities decline to 20,000 per 100 milliliters at Kansas City, Kansas. Average monthly values reached 380,000 coliforms per 100 milliliters at St. Joseph and nearly 100,000 coliforms per 100 milliliters at Kansas City, Kansas, during 1955 and 130,000 and 250,000, respectively, in 1956.

Maximum coliform values ranged much higher than the average monthly values. The highest figure was 1,600,000 coliforms per 100 milliliters at both St. Joseph and the Kansas City, Kansas, water intakes for the 1955-56 period.

Did you point out the horizontal lines at the five, ten and twenty thousand levels about which we talked?

Chart No. 3 indicates that the percent of samples with coliform consistently exceeded acceptable values. It should again be noted that the accepted levels of coliform density are measured in two ways: (a) not to exceed a density of 5,000 per 100 milliliters, and (b) not more than 5 percent of sample should exceed densities of the 20,000 level. The chart shows that at Kansas City, Kansas, densities of 5,000 were exceeded in over 95 percent of the samples, densities of 10,000 in over 90 percent of the samples, and densities of 20,000 in over 75 percent of the samples.

The chart also indicates the progressive increase in pollution downstream from the area of reservoir regulation, where quality is very good.

The next and final chart indicates that pollutional conditions as represented by coliform-type bacteria are less severe at water intakes than at points between principal cities. That is readily understandable in that the water supply intake represents the greatest distance, usually, between the upstream community and the maximum opportunity for self purification within the stream. While this fact suggests that water plants have the most favorable locations under the circumstances, it also points out that pollutional damages to uses other than water supply may be considerably greater than can be measured by treatment problems posed at various municipal water plants. You can see how at each major community the coliform level proceeds sharply upward, recovers with the stream purification as you approach the next downstream city.

As the result of the investigations and studies made over the several years, and in the light of complaints, information, and other data in the files of the Public Health Service, it is evident that pollution of the Lower Missouri River exists. It is further evident that this pollution is of an interstate character. Finally, it is apparent that the effects of this pollution are detrimental to the reasonable use of the waters of the Missouri River for municipal and industrial water supply purposes, commercial fishing, recreational fishing, boating, and other recreational pursuits. Public opinion is more alert than ever before to the dangers and ill effects of water pollution, and there is every indication that the citizens of each concerned community and the business and industrial leaders of the area are ready to move forward to effectively solve this problem so vital to conserving the region's basic water resource.

Thank you, Mr. Chairman.

CHAIRMAN STEIN: Thank you, Mr. Hopkins.

Do you have any questions, Mr. Happy, or Mr. Metzler, or do you have any comments to make on the statement?

MR. HAPPY: I have none.

CHAIRMAN STEIN: Mr. Metzler?

MR. METZLER: I think not at this time, thank you.

CHAIRMAN STEIN: Mr. hopkins, I would like to ask you one or two questions, largely for emphasis.

Under the Federal Act, as you know, the term "interstate waters" means all rivers, lakes, and other waters that flow across, or form a part of, boundaries between two or more states. Would you say that the stretch of the Missouri River which you have described in your statement meets that definition of interstate waters?

MR. HOPKINS: Without reservation.

CHAIRMAN STEIN: The next question relates to the jurisdiction of the Federal Government for the purposes of this conference. As you know, pollution of interstate waters which endangers the health or welfare of persons in a State other than that in which the discharge originates is subject to abatement as provided under the Federal Act. In your opinion does the pollution you described fit this definition?

MR. HOPKINS: Yes, sir.

CHAIRMAN STEIN: Thank you.

I should now like to call on Mr. Albert W. Happy of Missouri for a statement on the sources of pollution and natures of wastes.

MR. HAPPY: Mr. Chairman, I shall ask Mr. Clifford Summers, of the Missouri Division of Health, to present the statement of our agency.

Mr. Summers.

MR. SUMMERS: Mr. Chairman, Mr. Mayor, and gentlemen.

The Missouri Division of Health has been active in the field of water pollution control for the past three decades. In the past the Division has been limited to the investigation and control of water pollution as it affects public health and the sources of public water supplies. In carrying out this purpose, the Division has been successful in protecting water resources for other water uses such as industrial, recreational, wildlife and agricultural. The Division has operated under the general provisions of the Statutes of Missouri, presently described under Section 192.020 and Section 192.200, Revised Statutes of Missouri, 1949, and under regulatory authority vested in the Division by the Constitution of Missouri. Because of the broad responsibilities of the Division in the water pollution control field, this agency was designated as the Official

Water Pollution Control Agency for the State of Missouri by gubernatorial proclamation in 1948.

The Division conducted water pollution control activities in cooperation with the U. S. Public Health Service and adjoining states under the Federal Water Pollution Control Act of 1948, more commonly known as Public Law 845. In this connection cooperative studies of interstate streams, including the Missouri River, were combined with pollution investigations of the waters of the State and were reported in A Cooperative State-Federal Report on Water Pollution, Lower Missouri River Basin Water Pollution Investigation, October, 1952. This report was followed by a Comprehensive Program for the Control of Water Pollution in the Missouri Drainage Basin, published in July, 1953.

The Division has attempted through the process of inspection, reporting, and encouraging construction of abatement works to carry out this program for the control of water pollution. The cooperative approach to the abatement of water pollution has been very successful in tributary streams, with the result that all but a few municipalities and industries discharging wastes to these tributary streams have provided or are in the process of providing abatement works. Abatement of the pollution and carrying out of the recommendations contained in the 1953 program is approximately seventy percent complete on the tributary streams within the State of Missouri, when considered as the number of sources. Abatement of pollution on the main stem of the Missouri River has not progressed as rapidly, and while some preliminary planning has been accomplished, no abatement works on the main stem have been completed.

In connection with the occurrence of pollution of interstate water in the vicinity of St. Joseph, Missouri, data published in the Lower Missouri River Basin Water Pollution Investigation, October, 1952, have been revised to reflect current findings regarding the contribution of domestic and industrial wastes to the Missouri River in this vicinity. With one exception, all the pollutional load contributed by the community of St. Joseph, both industrial and domestic, is discharged through the municipal sewerage system of the city. The one exception is the Consumers Cooperative Association, manufacturers of phosphate fertilizers.

No data concerning the degree of pollution from this source has been collected, although it is known that high fluoride content can be expected in waste from the manufacture of phosphate fertilizers. The remaining pollutional sources consist of the domestic waste contributed by approximately 65,000 persons connected to and using the municipal sewerage system and from several industries located within the city limits of St. Joseph. These industries located within the city limits contribute industrial wastes equivalent to a population of 103,500 on a B.O.D. comparison and 59,480 on a solids contribution comparison. An additional group of industries located outside the city limits in the St. Joseph Stockyards area contribute industrial waste loads, through a connection to the city outfall sewer, equivalent to a population of 477,200 on a B.O.D. basis or 277,700 population based on solids.

The total organic pollutional load to the Missouri River from the community and industrial activities in the St. Joseph area is now estimated by the Division of Health to be 645,700 population equivalents on a B.O.D. basis or 402,180 population equivalents on a solids content basis. These figures do not include the pollutional load known to be contributed by several grain-washing operations conducted in the area. The increase in pollution illustrated by the above figures represents approximately 15.5 percent increase over figures published in the 1952 report. Revised sections of Tables 9 and 10, as published in the 1952 report, are submitted with this statement for the purpose

of illustrating Division of Health findings regarding the current pollution discharge through the St. Joseph municipal sewer.

Until June 4, 1957, paunch manure and garbage were dumped in a manhole on the Stockyards sewer. This practice was stopped on the above date, not for the purpose of eliminating pollution to the Missouri River but for the purpose of permitting repair to the outfall sewer. Resumption of this practice after repairs are completed will not be approved by the Division of Health.

In all fairness, it is necessary to report that the above figures do not correspond with estimates of pollution supplied by those industries listed under Table 10 to engineers employed to consider sewage treatment facilities for the city. Division of Health estimates are based on normal plant operations and processes at the peak of industrial production. The waste quantities supplied by Industry are approximately fifty percent of those figures reported by the Division of Health in Tables 9 and 10.

It is our belief that in reporting pollutional loads to the Missouri River in this area the potential must be considered rather than present pollution loads which are affected by the economic conditions of the market. The Division will require that flow measurements, B.O.D., and solids analyses under several conditions of production be made before plans and specifications for abatement works are prepared.

(Tables 9 and 10, referred to by Mr. Summers, are marked Exhibit MC-1 and appended to this transcript.)

MR. SUMMERS: I would like to ask at this time for a statement from Mr. Paul Barnickol with the Missouri Conservation Commission.

Mr. Barnickol.

CHAIRMAN STEIN: Mr. Summers, may I have a copy of that statement for the record?

MR. SUMMERS: Yes.

CHAIRMAN STEIN: I would like to mark Mr. Hopkins' statement as Exhibit FC-1, and I should like to mark this statement Exhibit MC-1. I would suggest that if there are any other additional statements, after they are made they be submitted to the Chair so that the statements can be similarly marked as exhibits.

Mr. Barnickol.

MR. P. G. BARNICKOL (Chief Fishery Biologist, Conservation Commission): Mr. Chairman, Mr. Mayor, gentlemen.

Investigations of contamination of the Missouri River in the St. Joseph area date back to 1945 when the Conservation Commission conducted a survey of the Missouri River fishery. This investigation revealed the presence of untreated organic wastes resulting from the meat packing industry. These wastes were detected in considerable quantity downstream from St. Joseph despite the fact that the river was near flood stage at the time of the investigation. The volume of waste detected was high even when dilution resulting from a high volume of flow occurred.

In 1949, a statewide survey of pollution made by the Conservation Commission showed the presence of untreated industrial and sanitary wastes. Fish were reported to have been killed and reports of contamination by oil and tar were filed by commercial fishermen.

Further reports of contamination of the river in the St. Joseph area were filed in 1951 and again in 1953. An investigation of the St. Joseph waterfront made in 1953 revealed the discharge of oil, untreated sewage and meat packing industry wastes and other industrial wastes. Reports filed by commercial fishermen in 1953 stressed the effect upon the fishery of oil contamination. Similar reports filed in June and again in July, 1954, revealed a taste and odor problem in fish which reportedly resulted from oil contamination.

Another report in December, 1956, was filed in protest to the presence of garbage and sewage in the river. According to this report, 20 percent of the fish caught are not usable. As a result, some commercial fishermen discontinued their operation in 1956.

Contamination of these kinds would have both a direct and a slowly degrading effect upon fish, fish habitat and water-fowl habitat, with a corresponding deterioration of sport fishing, hunting and the commercial fishery.

Thank you.

CHAIRMAN STEIN: May I ask the conferees if they have any questions to ask of Mr. Barnickol or Mr. Summers?

MR. HAPPY: I have none.

CHAIRMAN STEIN: Mr. Metzler?

MR. METZLER: There is a little traffic noise over here and I am not sure but what you might have covered this, but is this primarily concerned with fish or is there other wildlife involved?

MR. BARNICKOL: It concerns fish and waterfowl. Oil contamination, of course, is detrimental to and deteriorates the habitat of waterfowl. The feathers of the birds become saturated with oil and they are unable to fly, so that it would affect both. We have no specific measurements on that, but I suspect there are other wildlife animals, such as muskrats and other animals with a fur value which utilize the river, which may also be affected.

CHAIRMAN STEIN: Thank you, Mr. Barnickol.

Do you have anything further, Mr. Summers?

MR. SUMMERS: Mr. Chairman, we have one additional prepared statement from Mr. J. C. Alexander, Engineer in Charge of the Water Section, Missouri Division of Resources and Development.

CHAIRMAN STEIN: Before Mr. Alexander begins, may we mark this last statement as MC-2.

MR. J. C. ALEXANDER (Engineer in Charge of Water Section, Missouri Division of Resources and Development): I am a little hoarse this morning, so if any of you can't hear me, why, speak up and I will talk a little louder.

Pollution in the Missouri River below St. Joseph has become so serious that the Missouri Division of Resources and Development is hesitant to suggest the area as a possible industrial site to water-using industries. Pollution is so obvious that one does not need to do more than view the stream to arrive at the correct conclusion that the river is a combination of city dump and open sewer. When the flow decreases throughout the non-navigation season, this condition becomes even more apparent and a person wonders how the water can ever be made safe for domestic use or even industrial purposes.

The industries which have investigated the potential of locating or establishing plants in Missouri are extremely critical of the fact that the streams are heavily polluted and treatment costs to condition the water for their use are excessive due, they say, to pollution. The cost of treatment before use to most industries is of far greater concern than that of returning unpolluted water to the stream. Under existing conditions to be found in the Missouri River they would have to take on the burden of removing other people's pollution as well as their own, an unfair expense to ask anyone to assume.

If the excessive pollution load is removed from our streams, it will place Missouri in an extremely favorable position for industrial expansion. Missouri is near the geographic center of the nation and the population center will eventually be in Missouri. Near the center of population with good railroads and highways, the only thing lacking to keep Missouri from forging ahead is the pollution in the streams.

The City of St. Joseph is certainly one of the favored sites for further industrial expansion and is served by good highways and railroads. It is also an important trade center for a prosperous area of Missouri and Kansas. The city has been alert to the advantages of securing industry; however, the neglect in eliminating pollution has apparently ruined some industrial sites locally and discouraged location of industry at other places downstream.

Damage from pollution is not limited to industry alone. There are many people who desire to use the Missouri River for recreation purposes. Some would like to take a boat ride on a reasonably unpolluted stream or maybe do a little fishing; however, it is rather difficult to see how anyone could get much enjoyment on the river when they are among so much objectionable refuse from our homes and cities. It is obvious why that reach of the river below St. Joseph is not frequented by those people who like to spend their spare time on the water.

This load of pollution material which is placed in the stream by the City of St. Joseph robs it of any recreational value for many miles below the city. It is extremely difficult to understand how anyone could use a highly polluted stream for purposes of recreation.

It is not our thought that purity of the water in the stream be maintained to such a high standard that it can be drunk without treatment, but we are of the opinion that it must be protected from pollution to the extent that it will be of high enough quality that it can be used by industry, municipalities, agriculture, and recreation without undue treatment costs to users. Also, Mis-

souri's needs for greater quantities of high quality water are increasing rapidly each year. If this water is not provided by elimination of pollution we, as a state, will suffer through this neglect of one of our most valuable natural resources.

The problem that St. Joseph is creating by polluting the river is real and also extremely serious. However, it most certainly is not insurmountable. Therefore, St. Joseph should take the necessary steps immediately to eliminate this damage to the water of the state.

Thank you.

CHAIRMAN STEIN: May I have your statement, please?

We will mark this statement MC-3. Do the conferees have any questions to ask of Mr. Alexander or any comments to make on his statement?

MR. SUMMERS: That concludes our statements at this time.

CHAIRMAN STEIN: Thank you, Mr. Summers.

At this point I should like to call on Mr. Dwight F. Metzler of Kansas to speak as to the effects of this interstate pollution on present and potential water uses in Kansas.

Mr. Metzler.

MR. METZLER: Thank you.

Mr. Chairman, Mayor Dale, Mr. Happy and gentlemen.

The State of Kansas is concerned about the pollution of the Missouri River by municipal and industrial wastes discharged at St. Joseph, Missouri. This pollution adversely affects several beneficial water uses in Kansas, but our chief concern is for the protection of the Missouri River as a source of municipal water supply for the cities of Atchison, Leavenworth, and Kansas City, Kansas.

Samples collected from the Atchison raw water intake in 1950 had a coliform index of 70,000 per hundred milliliters. Of the samples collected from 1954 to this year, 7 percent had a coliform density over 100,000 per 100 milliliters, 15 percent over 50,000, an 36 percent had an index over 20,000. Coliforms roughly doubled from St. Joseph to the Atchison Water Works intake. This effect carries on downstream to Leavenworth and Kansas City, Kansas. In a 30-year period at the Water Works intake at Kansas City, Kansas, the coliform index has increased 12 times from an average index of 6,000 to 73,000 per 100 milliliters.

According to drinking water standards adopted by the State of Kansas, the U. S. Public Health Service and most of the state agencies, the raw water coliform density should not exceed 20,000 per 100 milliliters when a modern, complete water treatment plant is provided. By extensive and efficient use of chlorination it is possible to treat water containing 20,000 coliforms per 100 milliliters. However, chlorination becomes the only line of defense as the coliform density increases. Since chlorination is accomplished by man-made and

man-operated machines, and, therefore, is subject to malfunction, the hazard to the health of the public drinking the water becomes much greater as the number of coliform organisms increases.

Requests from Atchison city officials for assistance from Board of Health engineers in solving their water treatment problems have been numerous. Considerable difficulty has been experienced in the maintenance of adequate chlorine residuals because of fluctuating chlorine demands. Grease and wax have presented problems at the intake and on the filters of the water plant. Eggshells and other materials have complicated operation of the water treatment plant.

Damages to other beneficial water uses have not been as significant as the municipal water supply problem but are worthy of consideration. Sportsmen have complained about the effects of pollution on fish and wildlife. Grease has been stranded on sandbars for many miles downstream from St. Joseph. Livestock watering has been impaired at times and the aesthetic values associated with a clean stream and a healthful environment have been adversely affected.

The people of Kansas have demonstrated their desire to clean up the streams of the State. The tributary streams, and this is primarily the Kansas River and its tributaries, which involve roughly the northern half of the State of Kansas, is cleaned up under a program which was started by the Kansas State Board of Health in the spring of 1950. Thirty-four sewage treatment plant projects are under construction in Kansas at the present time and thirty-six such plants were completed in 1956. An average of twenty-five such projects have been completed each year for the past five years. Atchison and Leavenworth are committed to having sewage treatment plants under construction by January 1, 1959, on the assumption that adequate treatment facilities will be provided for the larger sources of pollution on the Missouri River. Atchison has employed engineers, this was done some months ago, and has acquired a site. The plans for Leavenworth's sewage treatment facility were completed and approved some years ago and are only being held in abeyance pending action by St. Joseph and Omaha. Atchison's plans and Leavenworth's plans include provision for collecting sewage from several Federal installations in the area for treatment at the city sewage treatment plant.

I appreciate this opportunity to make comments and if there are any questions, Mr. Chairman, I will try to answer them.

CHAIRMAN STEIN: Do you have any questions?

MR. HOPKINS: I have no questions.

MR. HAPPY: I have no questions.

CHAIRMAN STEIN: Thank you very much, Mr. Metzler.

Next we will turn to the adequacy of measures taken toward abatement and the nature of delays, if any, preventing such abatement of pollution. I think Mr. Metzler has already alluded to some of these delays, but now I should like to call on Mr. Happy of Missouri again for a statement.

MR. HAPPY: I would again like to call upon Mr. Clifford Summers to present our statement in regard to the nature of the delays.

MR. SUMMERS: Mr. Chairman.

The Division of Health of Missouri has advised the City of St. Joseph regarding the need for the construction of sewage treatment works. Industries contributing to pollution in this area have also been advised of their abatement needs. Early in 1955 the City of St. Joseph and those industries discharging industrial wastes through the St. Joseph municipal sewerage system were informed that the States of the Missouri River Basin had established dates for the planning and financing of abatement works by January 1, 1957, and for the construction of sewage treatment works by January 1, 1959. On March 14, 1955, the Common Council of the City of St. Joseph resolved to meet the schedule of pollution abatement requested by the Division of Health and further resolved to submit periodic progress reports on January 1 and July 1 of each year following the adoption of the resolution. After several meetings with city officials, an engineering firm was employed to prepare a supplementary engineering report on pumping, interceptors, and sewage treatment. In October 1955 the supplemental sewerage report was submitted to the city. During the period 1955 through 1957 continued reports on conditions in the Missouri River and the need for pollution abatement were supplied to the city by the Division of Health. Considerable correspondence and several meetings resulted from the disposal of garbage by the city of St. Joseph to the municipal sewerage system, resulting in a request dated January 25, 1957, to discontinue the practice of discharging domestic garbage through the sewer system. This practice has been temporarily discontinued for reasons previously appearing in the transcript.

The Division of Health received on June 5, 1957, an application from the City of St. Joseph for a Federal Grant for sewage works construction under 33 U.S.C. 466, etc. In the application it is stated that an election for the issuance of bonds to finance the local portion of the cost of sewage works is planned for November 12, 1957. Attached is a brief summary of all correspondence and actions regarding the abatement of water pollution in the St. Joseph, Missouri, area as briefed from Division of Health files.

June 24, 1952 - Burns and McDonnell Engineering Company was advised that the Division of Health recommended primary treatment of sewage for Rose Crans Memorial Airport, and further advised that within the next few years primary treatment of sewage before discharge to the Missouri River would be required.

April 15, 1953 - In a report on review of plans and specifications the City of St. Joseph was advised to design extensions as sanitary sewers instead of combination in newly developed areas.

July 21, 1953 - In a report on plans and specifications for sewer extensions in Sewer District No. 134, the city was advised as follows: "It is the opinion of the Division of Health that the city of St. Joseph will be required to provide primary treatment of their sewage in the future. It is felt that all future sewer extensions should be designed as sanitary sewers and that every effort be made to eliminate storm water from the system."

August 31, 1953 - In a review of report on long range sewerage plan, St. Joseph, Missouri, contained the recommendation that the city plan to include interceptor sewers, lift stations, and immediate future improvement program.

March 3, 1954 - The Division of Health was advised by the Public Health Service that lower Missouri River Basin states were in agreement that primary treatment

of sewage and industrial wastes would be required prior to discharge to the Missouri River and that realistic planning and financing for construction should be instigated at an early date.

March 3 and 4, 1954 - The City of St. Joseph, Mokin Products Company, Anchor Serum Company, Armour & Company, Consumers Cooperative, St. Joseph Stockyards Company, Swift & Company, and Lederle Laboratories were advised that the states in the lower Missouri River Basin had agreed that primary treatment of sewage was essential to protect the Missouri River against pollution and a recommendation was made to provide for primary sewage treatment in any future sewerage improvement program.

March 4, 1954 - The city was advised concerning requirements for sewage treatment and requested to report progress to the Division of Health in order that joint progress reviews of abatement progress could be made with other states in the Basin.

March 8, 1954 - Mayor Stanley I. Dale, St. Joseph, Missouri, requested information regarding the type of treatment recommended or required prior to discharge to the River. This letter also advised that the sewer proposal was defeated in November and advised that a sewer program might be submitted to the voters within the next year.

December 30, 1954 - The officials of St. Joseph, Missouri, were advised by the Division of Health that extensions of combined sewers would not be approved, but that sewers carrying sanitary sewage only could be connected to the present combined sewer system. The city was further advised that the Division of Health would expect all cities contributing to interstate pollution of the Missouri River to meet the dates of January I, 1957, for completion of preliminary plans and arrangements for financing of abatement works, and January 1, 1959, for the awarding of construction contracts for abatement works in keeping with agreements by the water pollution control agencies of the Missouri River Basin states. It was further recommended that the city proceed at once with preliminary plans and cost estimates for interceptor sewers and sewage treatment works and that no bond issue for sewer extensions be presented to the voters until they have been advised regarding the estimated cost and time schedule for sewage treatment facilities.

December 30, 1954 - The Mokin Produce Company was advised of the dates of January 1, 1957, and January 1, 1959, as dates established for completion of financial arrangements and the start of construction of abatement works, respectively.

January 3, 1955 - Lederle Laboratories, Anchor Serum Company, Consumers Cooperative, Armour & Company, the St. Joseph Stockyards Company, and Swift and Company were notified of the dates of January 1, 1957, and January 1, 1959, as dates established for arranging financing and beginning construction of abatement works, respectively.

February 10, 1955 - The Division of Health was advised by the Public Health Service to report on the current status of action for abating interstate pollution originating from St. Joseph.

February 28, 1955 - A discussion was held with city regarding needs and progress toward pollution abatement. The Division of Health, Kansas State Board of Health, and Public Health Service were represented.

March 14, 1955 - The Common Council of the City of St. Joseph by council resolution resolved to make every effort to meet the schedule of pollution abatement referred to in the Division of Health letter of December 30, 1954, and resolved to submit periodic progress reports on January 1 and July 1 of each year following the adoption of the resolution.

March 16, 1955 - The city was advised to cease dumping garbage into River.

April 5, 1955 - In replying to the city's request to review a report prepared by the Citizens Sewer Bond Committee of St. Joseph, Missouri, the Division of Health recommended that the city proceed to obtain an engineering report on pumping, interceptors, and sewage treatment before holding a bond issue in order that voters would be aware of the ultimate cost of the sewage improvement program. The Citizens Committee had recommended including $50,000 in the bond issue for the purpose of obtaining a preliminary design and cost estimates for interceptor sewers and primary sewage treatment plant.

April 8, 1955 - Mayor Stanley I. Dale replied to the comments on the Citizens Committee proposals and, as a result, a conference was set for May 24, 1955.

May 24, 1955 - As a result of correspondence and the conference held on this date, the city proceeded to instruct their engineers to prepare a supplemental report covering the interception, pumping, and treatment of sewage prior to submitting a bond issue for sewer repair and extension to the citizens of St. Joseph.

July 1, 1955 - The Division of Health was advised by Mr. Glen J. Hopkins, Public Health Service, that a representative of Black & Veatch, Consulting Engineers for the City of St. Joseph, had contacted his office in regard to abatement needs and background information for the St. Joseph report being prepared by that firm. Information was given to the firm in this regard and reported to the Division of Health.

October 1, 1955 - A report prepared by Black & Veatch covering interception and treatment of sewage was reviewed and comments submitted to the engineers.

November 2, 1955 - The supplemental report covering interception, pumping, and treatment of sewage for the City of St. Joseph was approved by the Division of Health and Plan No. 3 was recommended for adoption by the city. Again the Division of Health advised that financing of the project should be arranged before January 1, 1957.

November 3, 1955 - The Division of Health was advised by Mayor Stanley I. Dale that he personally favored Plan No. 3, that the report had been brought to the attention of the voters through the press, radio, and television, and that the city planned to present a bond issue to assure financing to the voters in December, 1956.

March 8, 1956 - The Division of Health reported on garbage disposal and recommended against discharging domestic garbage to sewers and against flushing feeding pens to old channel of River.

March 28, 1956 - A report on garbage disposal for the City of St. Joseph, Missouri, was transmitted to the Division of Health in which it was recommended that a comprehensive plan be developed to provide sanitary garbage disposal

and that refuse from the stockyards bedding area be disposed of by sanitary landfill instead of by discharge to the municipal sewer system.

July 27, 1956 - The City requested to be considered for Federal grant for sewage works construction and was advised that as soon as application forms were available they would be supplied to the City.

August 21, 1956 - The Division of Health approved plans and specifications for sewerage improvements and repairs to the existing combination sewer system.

November 26, 1956 - The city was furnished necessary forms for completing application for Federal grant under Public Law 660.

January 18, 1957 - The Division of Health requested information from the city regarding the status of their filing of application for Federal grant and on January 24 was advised by the city that they would appreciate advice concerning those portions of the project eligible for consideration under Federal grant.

January 25, 1957 - An inspection of garbage disposal revealed that leavings from hog feeding were no longer flushed to the old River channel. The remainder of domestic garbage was still discharged to sewer.

February 8, 1957 - The city was advised concerning completion of the application.

February 21, 1957 - The Division of Health was advised by the Public Health Service that a conference pursuant to Public Law 660 would be held at St. Joseph, Missouri, on June 11, 1957.

March 14, 1957 - The city heard a proposal by Municipal Service Company regarding the financing and construction plan for sewage treatment facilities. Representatives of the Division of Health were present when the proposal was presented.

April 4, 1957 - The Division of Health was advised by the city that garbage and paunch manure were no longer being discharged to the municipal sewer and that equipment for sanitary landfill method of disposal had been authorized.

April 8, 1957 - The F. M. Stamper Company was advised to find other means for disposal of eggshells than through the municipal sewer system of St. Joseph co the Missouri River. St. Joseph Stockyards Company was advised to discontinue discharge of manure to the sewer.

At this time I would like to ask Mayor Dale to speak in behalf of the city and--

CHAIRMAN STEIN: Mr. Summers, before we do that may we call on the conferees for any questions or comments.

MR. HAPPY: I have no questions.

MR. METZLER: I have no questions.

MR. HOPKINS: I have no questions.

CHAIRMAN STEIN: May I ask you one question. In these plans for St. Joseph,

does that include treatment of industrial wastes of the associated stockyard area or to your knowledge does that include the municipal wastes?

MR. SUMMERS: That includes--it was set up under three proposals. We have been informed--and this appears later in these dates--by the Mayor that he personally favors Plan No. 3, which recommends the inclusion of the stockyards area in the treatment facility.

CHAIRMAN STEIN: O.K.

MR. SUMMERS: Mayor Dale.

MAYOR DALE: Thank you very much. I feel somewhat like the big, bad wolf and the United States Government is Little Red Riding Hood. But I would like for the record to show the other representatives in the city who are present on this occasion in addition to myself. We have James Welsh, President of the Common Council, John Beaumont, member of the Common Council, John Rupp, member of the Common Council, Walter Welsh, City Clerk, Martin Ericson, Director of Sanitation, Harry W. Kurtz, President of the Board of Public Works, Glen Riddle, City Engineer, and Robert Brown, of the Engineering firm of Black and Veatch.

I think you all have a copy of my statement, do you not?

The members of the Common Council, the administration, and the people of St. Joseph are vitally interested in the elimination of the contamination of the Missouri River. We recognize the benefits to be derived from having a stream that is as pure as possible. We also can understand that the depositing of our raw sewage into the Missouri River may well affect the water intake at Atchison, Kansas.

The City of St. Joseph has expended approximately $20,000 on the preparation of a long-range sewage plan which includes sewer extensions, interceptor sewers, and a sewage disposal plant sufficient in capacity to take care of our present and future needs. These reports are on file with both the Division of Health and the United States Public Health Service.

We have already taken action to eliminate the dumping of garbage into the Missouri River by making provisions for the operation of a sanitary fill for combined garbage and trash. This problem should be eliminated, and when the contract is re-bid in 1959, it would be our intentions to provide that the contractor should deposit the garbage and trash collected in the sanitary fill maintained and operated by the City of St. Joseph.

I would like to interlineate at this point that it has been suggested that our elimination of the garbage from the stockyards sewer is merely temporary. I would like to state at this time that it is not our intention to ever go back to the dumping of garbage into the stockyards sewer. We plan to operate a sanitary fill and we are purchasing the equipment necessary to make the change.

Now back to the statement.

The sewer program for the City of St. Joseph is somewhat indefinite in cost, inasmuch as we do not know at this time whether facilities designed will be used by the stockyards interests. In the event that the stockyards interests do not decide to use the facilities of our disposal plant, the cost to the city

of St. Joseph would be approximately $4,585,000. Should the stockyards interests participate in the use of our disposal plant, the total cost would be approximately $5,421,000.

Application has already been made to the United States Government, through the Division of Health of the State of Missouri, for a Federal grant for sewage treatment works under 33 U.S.C. 466, et seq.

We have divided the program into two stages. The first would be the construction of the treatment plant, including a pump station, construction of Brown's Branch Pump Station and Force Main and a 48-inch gravity interceptor. The estimated cost of this construction is $2,181,000. This would be increased by approximately $836,000 should the stockyards interests join in the use of the disposal plant.

Stage two, upon which an application for Federal aid will later be submitted, provides for the construction of the Whitehead Pump Station, the 36-inch and 48-inch interceptor, and Roy's Branch Pump Station and Force Main. The estimated cost of this construction is $1,805,000. Added to these figures, of course, would be the engineering costs, the legal expense, the administrative expenditures, and the acquisition of land--bringing the total cost to $4,585,000, exclusive of stockyards use, or $5,421,000 if the stockyards area is included.

In our application for a Federal grant, we stated that it was our intention to submit a bond issue to the voters of St. Joseph on November 12, 1957. I feel that I can speak for all of the city officials in expressing our greatest hope that the bond issue will be successful and that one of St. Joseph's most expensive and serious problems can be eliminated. I cannot speak for the voting public, and, of course, they have the right, under their franchise, to either accept or reject the proposal submitted to them. However, certainly any fair-minded person who will examine the record will quickly form the conclusion that the members of the Common Council and the city administration have done and are doing their part in cooperating with the Federal Government toward the elimination of the pollution of the Missouri River.

This statement is jointly submitted by myself and James F. Welsh, President of the Common Council. It may be that some of those city officials that I have mentioned would like to supplement my remarks. I don't want to appear dictatorial and speak for all of them, because, as you probably know, we are somewhat divided politically.

MR. RUPP: Mr. Chairman, I would like to have an opportunity to--

CHAIRMAN STEIN: Will you identify yourself.

MR. RUPP: My name is John E. Rupp.

I don't mean to take up a lot of time, but this statement of the Mayor's I have just now read. I had never seen it before I came in this room.

I would like to take exception to paragraph 8 on page 2. He says it is the intention of the Common Council to provide for a bond election, that the people of St. Joseph are interested in eliminating the river pollution. I am not

certain that that is true. I take exception to it for that reason. I think that St. Joseph does have no moral or legal responsibility to provide for any pollution control for industries that exist outside of our city limits.

I also object to a statement that we have taken measures to eliminate the pumping of garbage into the Missouri River by the St. Joseph Sanitation System. Now, the dumping of garbage in the Missouri River by the St. Joseph Sanitation System is no problem of St. Joseph's. We have a contract with the St. Joseph Sanitation System that provides that they have the responsibility of the collection and disposal of garbage. On the other hand, the Federal Government has the right under the public law to take steps to abate the pollution that is being done by the St. Joseph Sanitation System and any industry that exists outside of our city limits

I don't believe that the St. Joseph Sanitation System will even temporarily be allowed to dump garbage in the city sanitary landfill at city expense, because the responsibility of disposing of their garbage is their responsibility, not the city's. I think that the people of St. Joseph certainly would be in favor of abating pollution, but I don't believe that they would be in favor of accepting any responsibility except their own. That applies not only to the industries outside of the city, but it also applies to the Sanitation System.

Thank you, Mr. Chairman.

CHAIRMAN STEIN: Thank you, Mr. Rupp.

Does anyone else from the city government want to make a statement?

MAYOR DALE: I just wanted to add this, that I think that you will find that the other four members of the Common Council are in accord with the statement as submitted.

CHAIRMAN STEIN: Thank you, Mr. Mayor.

MR. JAMES F. WELSH: That is the statement I was going to make. We are in accord with the statement that the Mayor has read.

CHAIRMAN STEIN: Thank you.

MR. JAMES F. WELSH: It is a thing that St. Joseph has to do and there is no out.

CHAIRMAN STEIN: Are there any questions or comments by the conferees of the city?

Mr. Hopkins.

MR. HOPKINS: I would like to address a question to Mr. Rupp. Would it not be a reasonable assumption that the responsibility of policing the contract that you have for garbage disposal would rest with the city, having entered into that contract?

MR. RUPP: Yes, sir, it very definitely does, it rests with the Mayor, who is the administration, he has charge of seeing to it through his legal department

that that contract is enforced, certainly. That is true and that is not being done.

MR. HOPKINS: I raised my question because of the inference that the Federal Government is free to take action against that aspect of the pollution. I believe that your answer covers my point.

CHAIRMAN STEIN: Mr. Mayor, I would like to ask a question or two. The St. Joseph Sanitation Company is under contract to the city, is that correct?

MAYOR DALE: Yes, they have a 10-year contract with the city.

CHAIRMAN STEIN: Are they collecting garbage and refuse from any points outside the city, too, to your knowledge?

MAYOR DALE: I am sure they are, under private contract, yes.

CHAIRMAN STEIN: Are they presently dumping garbage or refuse into the river?

MAYOR DALE: No.

CHAIRMAN STEIN: Thank you.

MR. RUPP: Mr. Chairman.

MR. METZLER: I think I would like to make a comment when you finish.

MR. RUPP: Mr. Chairman.

CHAIRMAN STEIN: Go ahead, Mr. Rupp.

MR. RUPP: There is a clause in the contract that says that the Sanitation System shall not violate any city, state or Federal laws. I think that perhaps that contract might eliminate the city from any responsibility toward the Federal Government, but instead places it upon the Sanitation System.

CHAIRMAN STEIN: I ordinarily don't like to comment on these things, but I don't think by writing clauses in contracts any private party has the authority to violate a state, Federal or city law. That would be a funny state of affairs.

MR. RUPP: Mr. Chairman, I am not a lawyer, I am an undertaker by profession, but it would seem to me that if you went into court with this thing that the city of St. Joseph could be asked--could ask for dismissal as a defendant in any case that the Federal Government might file, that it would instead be the St. Joseph Sanitation System that would be defending themselves.

CHAIRMAN STEIN: Mr. Rupp, I happen to be a lawyer and I don't like to answer these questions. I think the purpose of the conference, and let's try to keep this thing in mind, we are not thinking in terms of going to court or taking any legal action; we are trying to sit down in an informal conference of state, local and Federal officials to try to work out an equitable solution to the problem. We have not brought up this question of court and we don't intend to. I am sure this can be worked out on a reasonable, informal basis to the satisfaction of all parties concerned.

Mr. Metzler, do you have any comment or question?

MR. METZLER: Well, I did want to make one comment. I think that Kansas would want to acknowledge that this plan which has been presented here by the Mayor is a very forthright statement of plan and also the problem which you have. It seems to me that it is quite realistic of accomplishment and yet it is very fair to those communities in Kansas which are downstream and are using this water, but also themselves are planning to build sewage treatment facilities. And I would hope that the Council could unanimously get behind this plan and present a united front on it to the city officials. I realize that there is nothing that has any less status in Missouri than a Jayhawker, and so I won't give you any advice. If this was a Kansas council, I said this essentially to the Wichita City Commission the other day, that out of 200 bond elections that have been passed in Kansas in the last nine years for sewage treatment we had not seen a single one fail where the city governing body was essentially behind the proposal. The only ones that have failed and have been voted on again have been in those cases where for some reason or other there was a substantial split on the governing body.

CHAIRMAN STEIN: Do you have any more folks?

First, may I ask Mayor Dale just some more questions. One, I see you have your proposed improvement, at least your statement, divided into two stages. Now, I assume that Stage 2 will pick up a substantial portion of the city's sewage, is that correct?

MAYOR DALE: Yes.

CHAIRMAN STEIN: Now, have you in your own mind set up a time table for the accomplishment of that? In your statement that is left a little vague and I wonder if we could perhaps get a little more precise information on your intentions.

MAYOR DALE: Of course it is vague and somewhat difficult because we don't ourselves know exactly what the situation is going to be at this time.

Although it is divided into two stages, it is not our plan to submit it to the voters in two stages. It is our plan to submit it to the voters in one proposition, but it has been divided into two stages so that we could get two Federal grants. We figure that if we can get $500,000 instead of $250,000 that is to the advantage of the people of St. Joseph. And in the application for the Federal grant we have set out specifically the time table that would be set up by the city, but of course it is no better than a guess. I think that we said that after the bond issue had carried on November 12 we would hope to have the plans and specifications available within six months, and then after that we would hope within the next six months to have the program under contract.

Now, as to the construction time, we have been told anywhere from a year to two years. I think Black & Veatch have said that it would probably take two years to complete construction of the entire program.

Now, that is about the best I can say, which would run it approximately January 1, 1960.

CHAIRMAN STEIN: Well, that certainly clarifies what you intend to do. Thank you very much.

MAYOR DALE: But I offer no guarantees.

CHAIRMAN STEIN: No, of course not.

Mr. Summers, do you have any other to present?

MR. SUMMERS: The Mayor has stated that things are rather indefinite as to whether the facilities will be designed to take care of the stockyards interests. For this reason we have requested some of the representatives of the industries outside of the city limits to make statements regarding their position.

I would like to call first on Dr. R. C. Percival, with Lederle Laboratories. Is Dr. Percival here?

DR. PERCIVAL: American Cyanamid is not prepared to make a statement at this time.

MR SUMMERS: Next --

CHAIRMAN STEIN: Pardon me. Would you care to identify yourself for the record or would you rather not?

DR. PERCIVAL: R. C. Percival, American Cyanamid Company.

MR. SUMMERS: Next I would like to call on Mr. True Davis, with the Anchor Serum Company. Mr. Davis? Is there any representative from the Anchor Serum Company here that would care to make a statement?

Mr. Harold Glass with Armour & Company?

MR. GLASS: Right here.

Armour & Company is most anxious--

CHAIRMAN STEIN: Mr. Glass, would you mind coming up here so we all can hear you? Thank you.

MR. GLASS: Mr. Chairman, Mayor Dale, gentlemen.

Armour & Company is most anxious to cooperate in the solution of this problem. We are, as the people of St. Joseph and the stockyards interests know, connected to a common sewer and/consequence we will have to move somewhat in line with the stockyards interests. Right at this time that question has not been fully resolved just exactly what we will do. We are having meetings and that should be culminated in the not too distant future.

We are most anxious to cooperate and we will do everything we can.

CHAIRMAN STEIN: Thank you very much, Mr. Glass.

MR. METZLER: I would like to ask this witness a question, if I could.

CHAIRMAN STEIN: Yes. It is your privilege, of course, to answer or not.

MR. GLASS: Yes, sir.

MR. METZLER: Mr. Glass, I am interested in knowing what Armour and perhaps some of the other companies, but specifically Armour, may have done in the way of studying its own problems to see how much you can by good or, let's say, by improved housekeeping practices you can reduce loads. Have you, your own firm of consultants--

MR. GLASS: We have made tremendous improvements over a period of years; I am not prepared exactly to say how many years that has been. We screened out the biggest part of our solids and I think you will notice in the Black & Veatch report they indicate that our pollution is less than our type of industry's average at the present time.

MR. RUPP: Mr. Chairman.

CHAIRMAN STEIN: Yes.

MR. RUPP: Mr. Glass, will you answer a question?

MR. GLASS: I will try to.

MR. RUPP: Has your company or any of the other--your company, that is, given any consideration toward being brought into the city limits of St. Joseph?

MR. GLASS: I am not prepared to answer that one, Mr. Rupp.

MR. RUPP: All right.

CHAIRMAN STEIN: Are there any other further comments on Mr. Glass's statement?

Mr. Summers.

MR. SUMMERS: I would like to call on Mr. Glen Six with Swift & Company.

MR. SIX: Mr. Chairman, gentlemen.

We have been cooperating with the city on this sewerage disposal since the beginning, I think, we have been in contact with the city working out our problems together. We want to continue to do it. We know the need, and the gentleman on the corner over there, I can't remember his name--

MR. METZLER: Metzler.

MR. SIX: --whether you want to ask this question or not, we have improved considerably over the years, installing catch basins and other things to save solids from going into the stream. But I would like to say that we are just as interested in this as the city or anybody else and we will continue to be until we come to a meeting of the minds.

That is all I have to say.

CHAIRMAN STEIN: Are there any comments or questions to Mr. Six from the conferees?

MR. HAPPY: I don't have any.

MR. HOPKINS: No, sir.

CHAIRMAN STEIN: Thank you, Mr. Six.

MR. RUPP: Mr. Chairman, I would like to ask him a question.

CHAIRMAN STEIN: Yes.

MR. RUPP: Mr. Six, may I ask a question, sir?

MR. SIX: Yes.

MR. RUPP: Has Swift & Company given any consideration toward being brought into the city limits of St. Joseph?

MR. SIX: Well, I don't think that is a question that comes in this meeting, is it?

CHAIRMAN STEIN: You don't have to--

MR. RUPP: You don't have to answer it.

CHAIRMAN STEIN: You don't have to answer the question or to entertain it.

MR. SIX: I will be glad to talk to you any time, but I don't think this is the time or place for it.

CHAIRMAN STEIN: All right, thank you, Mr. Six.

Mr. Summers.

MR. SUMMERS: I would like to call on Mr. E. F. McKee, Terminal Warehouse. Is Mr. McKee Here?

MR. GILBERT: Mr. McKee isn't here, but I am H. J. Gilbert.

All I have to say is that we are cooperating in every way that we can and will continue to do so. The Terminal Warehouses operate a cold storage warehouse and we lease part of our properties to Standard Brands. The Standard Brands have been putting eggshells in the sewer. Temporarily that practice has been discontinued.

That is all I have to say.

CHAIRMAN STEIN: Do you have any questions or comments?

MR. HAPPY: No, sir.

MR. METZLER: No, sir.

CHAIRMAN STEIN: Thank you.

MR. SUMMERS. Thank you, Mr. Gilbert.

I would like to ask for a statement now from Mr. John W. Bennett, with the St. Joseph Stockyards Company.

Mr. Bennett.

MR. BENNETT: Mr. Chairman, Mr. Mayor, gentlemen.

The St. Joseph Stockyards Company is concerned with the problem of stream pollution and is willing to cooperate in an over-all endeavor to correct the situation. We are willing to work closely with the city of St. Joseph, the State and Federal authorities, and expect to do our part as the program proceeds.

The principal pollution of the Missouri River from the sewage of the St. Joseph Stockyards Company is through the disposal of manure created by the livestock held in the yards. The Stockyards Company is about to complete a contract whereby all cattle and sheep manure will be processed and shipped by railroad cars to another part of the country for fertilizer purposes. Freight rates have been the deterrent factor, but in the last few weeks this problem has been solved. We expect completion of the above-mentioned arrangements in the next six to nine months.

Plans for sanitary disposal of any other waste in connection with our sewage is coupled with the building of a primary plant in conjunction with the city of St. Joseph. Such plans are being discussed with the city government at this time. Assuming that these plans materialize and that a bond issue is approved by the voters, a solution to the problem should come within a reasonable time.

In the interim river pollution will be held to a minimum by the St. Joseph Stockyards Company.

Is there any question?

CHAIRMAN STEIN: Thank you.

MR. SUMMERS: Mayor Dale called my attention to the fact that the Seitz Packing Company is now constructing a plant in the stockyards area. I wonder if Mr. Lingle would have anything to say regarding Seitz' position?

MR. LINGLE: E. Y. Lingle.

Mr. Chairman, we have no plan outside of the city limits now, but as was mentioned we are building one. We are exploring the possibility of installing our own system to clean our water that comes out of our plant. I don't know how much it is going to cost.

I should think that it would be much more economical for the people in the stockyards industry and the other industries down there to be connected to a city disposal plant, and if I had to say what we should do now I should say that that is what we should do. We should vote or we should be in agreement to be connected to the city disposal system.

CHAIRMAN STEIN: Do you have any question or comment?

Thank you very much.

Mr. Summers?

MR. SUMMERS: That takes care of the industry that is located in the stockyards area. There is one other industry that was mentioned in the transcript earlier, that is the Consumers Cooperative.

Is Mr. Greenberg here and would he like to make a statement concerning their position?

MR. WASSERMAN: Mr. Chairman, Mr. Mayor, members of the Common Council, gentlemen.

My name is Max Wasserman of Kansas City, Missouri. I represent the Consumers cooperative Association, which is a Kansas Corporation with our main offices at Kansas City, Missouri. We own and operate a fertilizer plant which is located on the lower Lake Contrary Road in South St. Joseph, Missouri.

We feel that we are a very minor, negligible contributor to the pollution of the Missouri River. However, we want to express at this time that we certainly want to cooperate in eliminating whatever can be done insofar as our own particular operation is concerned. We have given a great deal of thought to our particular problem and in the main our two possible sources of pollution are domestic sewage, which involves some office which is used by probably three--well, I am not exactly certain how much it is, but it is a comparatively small number.

Now, as to our own pollution from domestic sewage, we believe that this can be eliminated by installing a septic tank on land which we already own at a very nominal figure. So we don't feel that that, the domestic sewage, at least, is a great problem insofar as we are personally concerned.

Now, the affluent from the acidulation can possibly be eliminated by any of the following plans, to which we have already given a great deal of study and consideration but which we haven't finally concluded as yet which particular plan we want to follow.

We can first of all shut down our plant, that is the acidulation part of it, and use another process. There is another process that we feel might be practical and economical, so we have given consideration to that phase of it.

We can also construct settling ponds, which we have done in other areas in which we have fertilizer plants, and this would require the acquisition of some additional three acres of land and the construction of some earthen dams and concrete spillways.

The third plan which we have given consideration to is the installation of a complete treatment plant and we have been in contact with the J. C. Carlyle Corporation, which are engineering consultants at Denver, Colorado. They have a patented process for manufacturing sodium silica fluorides from the various gas fumes.

Then our fourth possible plan is the installation of a trickling reactor, and this is on the assumption that the only thing not acceptable to our present affluent is a low pH and this could be neutralized by treating with a cheap material such as limestone.

And the fifth, and the one we probably at this time have given the most serious

consideration to, is the drilling of a disposal well. Now, our geological department tells us that the Cherokee sand formation is a salt water formation which can be reached at a depth of less than 1,000 feet. This formation would probably take 500 barrels per day of waste water, which would be adequate for eight hours' operation of our sprays. Of course this plan is subject to both the approval of the Missouri Division of Health and the State Geologist.

Obviously any of these plans could be completed by us by the date of January, 1959.

CHAIRMAN STEIN: Thank you very much.
Do you have any comments?

MR. METZLER: Yes, I would like to ask Mr. Wasserman a question or two.

MR. WASSERMAN: Yes.

MR. METZLER: We have heard about the stockyard problems before, but this is a little new to me. Is this an ammonium nitrate plant? What kind of fertilizer?

MR. WASSERMAN: Superphosphate.

MR. METZLER: Superphosphate?

MR. WASSERMAN: Which is purely on a seasonal basis.

MR. METZLER: I see. What is the source of your phosphate?

MR. WASSERMAN: Sir?

MR. METZLER: What is the source?
MR. WASSERMAN: I can't answer that. I am not a technician.
MR. METZLER: I see.

MR. SUMMERS: Florida rock.

MR. METZLER: I see. Well, I was going to ask you some other questions here and I think that might better be answered by your engineer or someone of that sort. I won't pursue this.

MR. WASSERMAN. We will be glad to give you any information that you desire if you will contact us or our engineering department.

CHAIRMAN STEIN. Are there any other comments or questions of Mr. Wasserman?

Thank you.

MR. SUMMERS: The Consumers Cooperative operation wasn't, you understand, included in the report the city made. That was beyond the area of consideration of the city.

CHAIRMAN STEIN: Yes.

MR. SUMMERS: There is one other operation here that hasn't been heard but has been mentioned before. That is the St. Joseph Sanitation Company. Is Mr. Milder here?

MR. MILDER: Yes, sir.

CHAIRMAN STEIN: Would you repeat your name?

MR. MILDER: Morris Milder.

Mr. Chairman, members of the Council.

I believe that the Mayor gave you the information possibly better than I can. We have an arrangement now, and have had since the first of June, to put our debris on the city sanitary fill and we have been doing that.

CHAIRMAN STEIN: Do you have anything to add to that?

MR. MILDER: Not a Thing.

CHAIRMAN STEIN: Do you have any questions?

MR. MILDER: Both our garbage and trash.

CHAIRMAN STEIN: Mr. Smith, do you have a question?

MR. SMITH: Do you plan to continue that?

MR. MILDER: Yes, sir, for the life of our contract.

CHAIRMAN STEIN: Mr. Milder, do you collect garbage and refuse from places outside the city limits?

MR. MILDER: Yes, we have, oh, I don't know, two or three hundred customers.

CHAIRMAN STEIN: What do you intend to do with the material that you collect from those sources?

MR. MILDER: We put it on the dump.

CHAIRMAN STEIN: Do you have any present intention of continuing or re-continuing dumping garbage and refuse into the river?

MR. MILDER: Into the river? No, sir.

CHAIRMAN STEIN: Thank you.

MR. MILDER: You are welcome. Thank you.

MR. SUMMERS: Mr. Chairman, that concludes this portion of the testimony.

CHAIRMAN STEIN: Thank you, Mr. Summers.

I think at this stage we can see that the parties concerned, the states, the industries, and the municipalities have a very keen awareness of the problem and

there seems to have been a lot of thought given to reasonable solutions. I think also we have seen an expression of bona fide good faith on the part of all the parties to clean up this pollution situation.

For the purposes of this conference and largely one for the purposes of the law we have to in our conference indicate the nature of the delays, if any, being encountered in abating pollution.

Now, I wonder--and there is no need for you to do this unless you want to--if the States of Missouri and Kansas would care to make for the record a very short summary, in a sentence or two, characterizing the reasons for the delays up to this point. Again we can waive that requirement if you would rather not make a statement on that.

(Discussion off the record.)

CHAIRMAN STEIN: On the record again.

Mr. Metzler makes the point that the reasons for those delays have been rather adequately set forth, and while the official agencies may want to make a statement on the adequacy of the plans proposed, we perhaps have covered the nature of the delays.

Under the Federal Act if the Surgeon General believes upon conclusion of the conference that effective progress is not being made, he is required to make recommendations for remedial action. On the basis of past experience, I think that it is preferable for the conferees to establish a time schedule of remedial action so that the Surgeon General may come to the judgment that effective progress is being made toward the abatement of this pollution problem in the St. Joseph area. I think it is an essential part of administration, whether on the State, local or Federal level, in seeking remedial action that a time schedule be set up, because without such a time schedule it is very difficult to demonstrate that effective action is being taken or it is very difficult to demonstrate that a reasonable time has elapsed when no action has been taken. I think a time schedule will serve as a guide to the industries, the municipalities, the state agencies and the Federal Government as to the course of future action.

It will also, I am sure, if established serve as an indicator to the Surgeon General that effective progress is being made. I am sure again that from the point of view of a cooperative State, local, Federal program it is preferable to set up time schedules in a conference of this sort rather than to leave it to other means.

I would like at this point perhaps to call upon Missouri first to discuss the proposals made here with a possibility of looking toward a reasonable time schedule to achieve abatement of the pollution.

Mr. Happy.

MR. HAPPY: Mr. Chairman, as I have heard the various witnesses testify it appears from the statement given by the Mayor of the city of St. Joseph that there are two possibilities for proceeding, one including the interests in the stockyard area, one by the city proceeding on their own.

There appears to be a lack of progress in definite planning by the industries involved.

Therefore, under the time schedule that has been agreed upon by the states in the lower Missouri Basin there exists at this time a six-month delay in arrangement of finances for these improvements. I should like, if possible, for the Mayor to repeat, as I believe I heard, his suggested time schedule in his presentation.

Am I correct that you had made some commitment?

MAYOR DALE: Yes. My suggestion would be, if I might make it, that the plans and specifications would be completed by June 30, 1958, that the program would be under contract by January 1, 1959, and I think I said, figuring a year's construction time, construction would be completed by 1960 or during 1960.

CHAIRMAN STEIN: Does that include both phases, now?

MAYOR DALE: Yes. There will be no distinction, particularly in the construction.

CHAIRMAN STEIN: Yes.

MAYOR DALE: Only for the Federal aid.

CHAIRMAN STEIN: All right.

MR. HAPPY: Thank you. That was my understanding. I wanted to be sure on that point.

And the other facet is in, of course, your prepared statement, that it is the intention to submit the financing to the voters of St. Joseph on November 12, 1957?

MAYOR DALE: Yes, sir.

MR. HAPPY: Mr. Chairman, your question to me was to make a suggestion of a time schedule?

CHAIRMAN STEIN: Yes.

MR. HAPPY: In my opinion that schedule would be staisfactory.

CHAIRMAN STEIN: Yes. Now, Mr. Happy, may I ask your comments on two further aspects of this problem? One, we do have statements as to various solids which were being discharged into the river, garbage, refuse and paunch manure. As I understand the statements today, that practice has been discontinued. Now, as a recommendation here would you have any comment on the continuance of that practice or the perhaps permanency of the dis-continuance which might be a recommendation of the conferees?

MR. HAPPY: I believe that was stated in the presentation Mr. Summers made. Would you repeat that?

CHAIRMAN STEIN: I think we can all agree that garbage, refuse and paunch manure is not being put into the river at the present time.

MR. SUMMERS: That is right.

CHAIRMAN STEIN: As I understand your statement, you said that the Missouri Division

of Health would not countenance the--

MR. SUMMERS: That is right.

CHAIRMAN STEIN: --re-continuation or the renewal of that practice, is that right?

MR SUMMERS: That is right, yes, sir.

MR. HAPPY: Yes, sir.

CHAIRMAN STEIN: There is one more phase of this. We have directed the time schedule at the municipality of St. Joseph and I think the problem of whether the municipality joins with the stockyards group or goes on their own is a matter for determination between the parties. However, I think we do have the problem of establishing a time schedule for cessation of industrial pollution to the river or industrial discharges to the river from the associated stockyards area. Have you any views as to that, Mr. Happy?

MR. HAPPY: My views, if that should be a separate solution, that it abide by the same time schedule.

CHAIRMAN STEIN: In other words, if they are to have a separate plant--and I think the financing if it be separate will be private financing and need not concern the public agencies--that the plans and specifications for the associated stockyards group to accomplish the cessation of discharges to the river of polluting material be completed by June 30, 1958, and that contracts for construction of necessary remedial facilities be let by January 1, 1959?

MR. HAPPY: Yes.

CHAIRMAN STEIN: Thank you very much, Mr. Happy.

Do you have any comments on that, Mr. Metzler?

MR. METZLER: It seems to me those dates are quite adequate. I would think some word of warning ought to be sounded, however, on the industrial phase of this program. It seems to me that what we have heard today from some of the important contributors of waste load is essentially the same thing which we heard the last time we met in St. Joseph, I don't have that date in mind, but two years ago roughly.

Now, perhaps from the standpoint of negotiating contracts or receiving favorable arrangements for treating this waste specifically Armour and Swift & Company have not wanted to divulge the information that they have at hand, but it seemed to me that the statements of the serum companies and of those two stockyard companies are either inadequate or else they have a great deal of work to do before the city can proceed with this program. It would seem to me that the city in all good faith can try to go ahead with this, but that there will need to be some very stern action taken as far as these other polluters are concerned if the program is not to be delayed.

Just listening to the presentation, it seemed to me that Mr. Bennett with the St. Joseph Stockyards Company had about the--here is a company which specifically has a plan and which is doing something. Mr. Lingle in speaking for his plant

I thought had a good grasp of the problem too. But some of these others have a great deal of ground work to do and a long ways to go before January 1959.

CHAIRMAN STEIN: Thank you, Mr. Metzler.

Mr. Hopkins.

MR. HOPKINS: I am concerned only on two points not specifically covered. First there does not seem to be complete agreement among the official family of St. Joseph as to an approach. I am sure that that will be resolved with the bond issue that comes before the people.

After the bond issue is passed and before final plans and specifications can be drawn, the city must know what the plans of the industries in the area are. The Chairman mentioned that the problem of financing with a bond issue would not be apparent with the industries. But I think it is incumbent upon industry by the time or before the city has arranged its finances that the individual industries conclude their plans and if the election is made to join the city system that their negotiations with the city be completed on the same schedule that the city has been asked to consider the arrangement of finances, because the following plans cannot be completed until the firm understanding is reached between the city and the industries that it may serve.

I would ask that there be included in the schedule the additional proviso that any negotiations between the industries and the city relating to service by the city be completed by the same date that the city is expected to conclude its arrangements for finances.

CHAIRMAN STEIN: That is right.

Now I know you want to speak, Mayor Dale, but may we ask you this one question first. What do you consider the date when you will have to have definite word from the stockyard group whether they can go in? There may be two subsidiary questions. Let me ask this question and you may not want to do this. One, would you be willing to accept part of the stockyard group and not all or is it on an all or nothing basis?

MAYOR DALE: Well, I think that is primarily an engineering question.

CHAIRMAN STEIN: Right.

MAYOR DALE: However, as far as the contribution of the sewage, it is confined actually to only a handful of those that are located in that area anyway. That is, I think, the problem that they are having to work out is because the chief contribution is from just a handful of industries whereas they would like, of course, to bring all of the industries into the plan.

Now, my thought would be this, and that is what I was going to say, that as far as the city is concerned we would have to have our answer by September 1 of this year, and if we didn't have it on that date we would proceed alone and then that would be up to them to work out their program with the Federal Government individually. Because we have to be able to lay the picture out to the public to know that the stockyards interests are sharing their burden in paying their way in this program, and I don't think it would be practical to submit the bond issue and then work it out later when the financing comes through.

CHAIRMAN STEIN: That is what I wanted to know.

MR. HOPKINS: I would like to amend my suggestion, then, instead of concurrent with the arrangement of finances to accept the date that Mayor Dale has suggested of September 1 for the completion of negotiations by the industries that intend to proceed on their pollution control problem through the city installation.

CHAIRMAN STEIN: Yes.

We have come comment. Would you care to come up here in making this?

MR. LINGLE (Seitz Packing Company): All right. I have a question.

CHAIRMAN STEIN: Pardon me, before you begin. On this point we would welcome any other comment that any representative of industry would care to make.

MR. LINGLE: This is not a comment, it is a question. What would be the position of the livestock industries in the stockyards if we joined with the city in building one disposal unit and then the bond election should be defeated?

MR. SUMMERS: That is a pretty fair question.

CHAIRMAN STEIN: That is a very fair question, I think. The point is this. Let's step back. Once the city has accepted any industry, whether you are inside or outside the city, once the city has accepted the responsibility for discharging or collecting and treating your waste, generally the municipality is held responsible and not the individual industries.

Now, I do think that when we are dealing in a situation of this sort of course the cities and the industries are jointly and severally liable, that is you are liable collectively and individually for the pollution and the discharges and for cleaning up the pollution. Now, I think in a case of that sort of course there will have to be a re-appraisal of the situation and I think in that case, of course, that the onus of the situation certainly can't be put on industry because of that delay on a city bond issue not passing.

However, I do think that if this schedule is not realistic, and I don't know that it is not realistic in any event, that it may not be a very generous schedule, but I think this schedule, if the industry should join with the city and the bond issue should not pass, that the states and the Federal Government would have to re-appraise the entire situation and that would entail perhaps modifying the schedule if that were in order. Again I think we have a question here of--and this is what we are largely looking for--a demonstration of good faith on the part of both the city and the industries. If we believe that you folks are coming up with a course of action which at the end of a reasonable time will lead to abatement of the pollution, why, I think our record of the Public Health Service speaks for itself, we have always been entirely reasonable on those matters. I think I can perhaps speak as a suggestion for the conferees, that if industry does go in and this should fail that we would meet again and re-evaluate the schedule and the realities of the schedule in the light of that situation.

MR. LINGLE: Thank you very much.

Does the State of Missouri feel the same way?

MR. HAPPY: Well, yes, I think essentially we do. However, many times municipalities are confronted with that situation where an attempted bond issue election may fail. In such instances we naturally experience and expect another trial if that is indicated.

MR. LINGLE: Thanks very much.

MR. WELSH: Mr. Chairman.

CHAIRMAN STEIN: Yes.

MR. WELSH: I think the city of St. Joseph has a responsibility for the city of St. Joseph and our worry is not with the stockyards industry. Our worry is cleaning up St. Joseph. If this bond issue should fail, which I am hoping and praying it doesn't, the industries would still have to go on their own as they have now. Is that right?

CHAIRMAN STEIN: I think we pointed that out, that these folks are jointly and severally liable. Now, what we have pointed out, that we are not getting into, and I don't think it is the purpose of any government agency to get into, any relationships that the city may have with some private industry. However, if you folks should decide in conjunction with private industry to come up with a bona fide plan and make an effort to secure abatement of the pollutions within a reasonable time, if anything should happen to that plan we naturally make a re-appraisal of it.

Now, I think Mr. Happy pointed out the second choice of the bond issue. We have had schedules before and I don't think that any setback like this is any different than when we have had construction schedules and through some error in calculation we find solid bedrock where we have a tremendous drilling cost and a delay in construction. We naturally have to make an adjustment when something like that happens. But I don't think we should anticipate the pessimistic and negativistic approaches. I think what we should look for here is a positive approach on a reasonable basis to try to get the pollution cleaned up.

Now, in answer to your specific question, yes, the industries are individually responsible to stop putting discharges into the Missouri River which contributes to interstate pollution.

MAYOR DALE: I just wanted to add one thing. I think the record should show, in all fairness, that the terms of all the members of the Council and myself expire the third Monday in April of 1958, and any statements that I have made I hope, of course, my successor in office would follow, but I am not a candidate for re-election and I can't speak for my successor. I think in all fairness it should be termed that these would be our intentions and these would be the things that we would carry on through our successors should we not be in office.

CHAIRMAN STEIN: Thank you.

Mr. Rupp.

MR. RUPP: Mr. Chairman, I would like to make a statement. I think that what you are trying to do here is to get everything out aboveboard and out on the table and do something about stopping the pollution of the Missouri River.

I would like to say that it is my opinion that so long as the packing industries, that is the 17 industries, are outside of our city limits that any bond issue for the construction of a sewage disposal plant in November hasn't got any more chance than a snowball in hell.

Now, that is putting it pretty plain, but if you think along with me for a minute I think you can understand why people wouldn't go to the polls and vote for bonds when from your own Health Department facts it has been clearly shown today that it is the city's one part to the industries' four parts in pollution, that the voters might reasonably think, and that is the way the bonds are going to be passed is by votes, that it would be the position of the industries to construct the sewage disposal plant and rent it out or lease it out to the city on an annual basis at a fee, because they are the minor contributors of pollution.

I throw that in for what it might be worth, but I know that my brothers on the Council don't agree with me, I know the Mayor doesn't agree with me, but, believe me, I think I speak for the people. I think I know what is in their minds.

CHAIRMAN STEIN: Mr. Rupp, Mr. Hopkins would like to ask you a question.

MR. RUPP: Yes, sir.

MR. HOPKINS: I would like to point out first, the division of cost of providing for sewage treatment does not necessarily follow the same ratio as the magnitude of the load. A large part of the cost of this program includes interceptor sewers, for which the industries will have no use. The cost of the treatment plant itself is a relatively small part of the total expenditure.

Secondly, I think that the city's plan, from the information that I have gleaned from studying the engineer's report, provides for an equitable sharing of the cost of treatment by the industries that are served by the plant. Now, is it your feeling that the people of St. Joseph will object to industry and the city using a common plant if industry has paid its just and prorated share of the cost of that plant and its maintenance and operation?

MR. RUPP: I don't think the people would vote for those bonds. I think they believe that the industries should contribute to government the same as they do, whether it be for interceptor sewers or for a sewage disposal plant or for streets or for any sewers that people in one part of town have to pay for and that they get no service out of that are located in another. I think that the stockyards are a part of St. Joseph. I think that the stockyards industries consider St. Joseph their town. They use the labor here. They use our fire department. They use all of our utility services. And they should contribute to government the same as our homeowners and our businessmen do, and that would apply to the construction of a sewage disposal plant.

On the other hand, I believe that if those industries were brought inside the city limits and paid their regular taxes the same as anybody else did that the people would go to the polls and unanimously pass that bond issue and provide for everything that was necessary. I give you that as my opinion, sir.

MR. HOPKINS: I just wanted to make the point that--

MR. RUPP: I have nothing to do with elections. The people go vote for themselves.

MR. HOPKINS: That is all.

MR. METZLER: There is just one observation, perhaps, and I don't know that this is even the place to make it. I think Mr. Rupp has some good points which he has been bringing out here. Still the basic issue is shall the industry pay for what it is getting, and I wonder if you thought about the added efficiency or the lowered per capita cost of treatment as the size of the plant goes up? In other words, this is just like building automobiles, presumably a large manufacturer with a production line can run through automobiles at a little less cost than the small producer who essentially hand makes automobiles. The same thing is true of sewage treatment. It is cheaper to treat the second gallon of sewage than it is the first and it is a lot cheaper to treat the fiftieth gallon of sewage than it is the first. So there are some economies, it seems to me, if the program is worked out so that everybody pays for his fair share. Then there are some economies to the St. Joseph voters by the stockyards industries coming in on this program. I think you would want to think about this before you cut them off.

CHAIRMAN STEIN: Mayor Dale.

MAYOR DALE: Mr. Chairman, I would just like to say this, that if you examine this thing, and of course I know it is not the purpose of this conference to worry about the contractual arrangements between the stockyards interests and the city, but if anybody in this picture has driven a hard bargain I think it is the city, because in the Black & Veatch report it indicates that the stockyards area contributes approximately the same as what the city is contributing, so we felt, therefore, that we were going to make them pay half of the cost of the disposal plant, which is, I think, a million two hundred eighty-six thousand, whereas, from the engineering report, adding them on only costs eight hundred ten thousand. So we have driven a bargain of some four hundred thousand more than it actually would cost to add them on. Now, I don't know if they are going to agree to that, but that is the proposal we have made to them. So if anybody is carrying their share it is going to be them if they agree to what we have set up.

CHAIRMAN STEIN: Thank you.

MR. RUPP: Mr. Chairman.

CHAIRMAN STEIN: Mr. Rupp.

MR. RUPP: I would like to say that it might well be that if the stockyards and the packing houses and the remainder contributors of sewage to the Missouri River were required under the public law to abate their pollution in the Missouri River and the proper steps were taken against the Sanitation System to require them not to put garbage in the river, that the city might not ever need to build any type of disposal plant. It might be that your experts, the bacteriologists who go down and take bacterial specimen, might find that then after that plant is built that the type of solution that the city itself is putting in the river is so negligible that no sewage disposal plant would then be indicated.

MR. METZLER: I want to make one comment about this.

MR. RUPP: I may be wrong about this, Mr. Metzler, but my side of the story has got to be brought in, I think. There are two sides to the thing, see, and somebody has to talk from the other side because it has got to be brought out on the

table. That is the reason I am talking about it.

MR. METZLER: Sure.

MR. RUPP: I am not trying to start an argument with anybody. I have argued here for four years. Like Mayor Dale, I am going off the City Council April 3 and, like him, I do not intend to run for office again.

MR. METZLER: Certainly I won't want to start any argument about this. There are two points that are perhaps important. One is that it is not possible to bow out and say, well, we wouldn't have to treat our sewage if everybody else did the job they should, for two reasons, one is the size of the load and the other is that the five states and the Public Health Service have agreed that primary treatment of sewage is the minimum that is acceptable.

Now, for my other comment, let's be careful what you say in this educational campaign and let's remember that there are communities down below you and that they read the same newspapers that you read and that if you start saying, well, why should St. Joseph provide sewage treatment, Atchison and Leavenworth, which are much smaller contributors, might very well say to you, why, we will just back off, we will wait.

This needs to be done, if this program is successful it needs to be done, cooperatively with all the cities moving ahead at the same time getting it done, and this kind of question is five years too late or maybe fifty years too late, do we need to provide sewage treatment at St. Joseph, because the answer is that you do and there is no justification that I can think of for dumping the raw wastes of a community of this size into a stream even the size of the Missouri River.

CHAIRMAN STEIN: Before we attempt to summarize for the conferees the views of the conferees, I want to take this opportunity to call upon industry again to ask any representative of industry whether they have any further comment to make on this proposal?

If not, we will proceed with the summary.

I see no representative of industry and I think this is a summary of the conference for-- Yes.

MR. BENNETT (St. Joseph Stock Yards Company): I would like to make one comment for the stockyards industry, or at least ask a question.

Where you were taking the B.O.D. content sample of sewerage that ran so high, was that when the sewer was taking the garbage from the city of St. Joseph as well as load lots of manure that were being dumped in it?

MR. SUMMERS: That is right, that was before.

MR. BENNETT: It would be true that that count would greatly drop down now since there is no manure being dropped in the stream and no garbage being dumped in? Is that true?

MR. SUMMERS: Yes, and that is reflected in the engineer's report to the city, see.

MR. HOPKINS: One comment. Mr. Bennett, were you speaking of B.O.D. or coliform bacteria?

MR. BENNETT: Well, I don't know. I am talking about the load that the river carries. I am not competent to ask it that way.

MR. HOPKINS: The organic load measured in terms of B.O.D. would be diminished by taking out the materials that you mentioned. However, as far as bacteriological loading at water treatment plants, we have continuing records of daily analysis over the last two years that has not materially lessened the bacterial intensity that prevails at the water treatment plant.

MR. BENNETT: Yes, sir, but that stuff had been dumped in the stream until June 4, too.

MR. HOPKINS: Those analyses are going ahead every day.

MR. BENNETT: Well, they are now.

MR. HOPKINS: Yes.

MR. BENNETT: They show a different pattern, it is assumed that they will, is that correct?

MR. HOPKINS: We will very soon know, but very little reduction has been brought about.

MR. BENNETT: Thank you.

CHAIRMAN STEIN: Are there any other comments from industry before we proceed with the summary?

If none, I think that the conference has pointed out that below St. Joseph, Missouri, the Missouri River forms a state boundary between Missouri and Kansas, that one of the major sources of pollution of this reach of the Missouri River is the city of St. Joseph, Missouri, and its associated stockyard district from which untreated sewage and industrial wastes are discharged into the Missouri River. Up until recently garbage, refuse and paunch manure were also discharged, dumped into the Missouri River. Now this latter practice has ceased. The pollution caused by these discharges contribute significantly to deterioration of water quality for public water supply at Atchison, Leavenworth, and Kansas City, Kansas, with associated enhancement of possible disease transmission, increased concentration of coliform and other organisms associated with human diseases which constitute a health hazard to commercial and recreational users of the river, deterioration of water quality so as to interfere with its use for stock watering, deterioration of water quality so as to prevent full use of the commercial fishery of the Missouri River below St. Joseph, deterioration of water quality so as to create conditions inimical to fish and wildlife in the area, and impairment of the water quality for many industrial uses.

I think the conferees have unanimously come up with the recommendations and conclusions that, first, under no circumstances should the dumping of garbage, refuse or paunch manure be reinstituted in this stretch of the river; secondly, that the city of St. Joseph and its associated stockyard district institute remedial measures by building adequate treatment facilities for the discharge of its wastes; that plans and specifications, detailed plans and specifications, for those facilities be completed by June 30, 1958; and that contract awards for these facilities may be made by January 1, 1959.

As far as the municipal pollution is concerned, that is pollution from the city of St. Joseph, Missouri, the conferees agree that the city's proposal to submit the financing of this to the voters on November 12, 1957, for a vote on the bond issue, is reasonable. The conferees also take cognizance of the fact that the city officials of St. Joseph have proposed a treatment works which would treat and collect the industrial wastes from the stockyard area. However, in order for the city to go ahead with this joint proposal, it seems to be reasonable to the conferees that the city will have to have an answer as to whether the stockyard group wishes to join with the city by September 1, 1957. If the city does not get an affirmative answer by that time, the city would be justified in assuming that the stockyard group did not wish to join with the city and could then proceed on its own with just a municipal plant handling waste from within the city limits of St. Joseph.

I should like to also indicate at this point that when I use the term "paunch manure" in dealing with the dumping of solids into the river, that was meant to include other animal manure and bedding wastes of the stockyards.

Now, are there any addendum or amendments to the summary by the conferees or any clarifications you wish to make?

MR. HOPKINS: I would like to suggest that progress reports be submitted to the conferees through the Division of Health of Missouri at appropriate intervals. Six months? Well, let's say following each of the principal steps that have been outlined in the schedule.

MR. METZLER: After September 1 should be the first one.

MR. HOPKINS: After September 1, after the bond issue, after June 30 for planning, and after January 1 for construction.

CHAIRMAN STEIN: Could we again--I think you have that summarized that we will have periodic progress reports made to the conferees by the Division of Health of the State of Missouri after September 1, 1957, after November 12, 1957, after June 30, 1958, and after January 1, 1959.

If there are no further comments, I should like to close this conference with a vote of sincere thanks to Miss Hough for her wonderful work and thank you very much for coming.

There may be one further comment.

MR. BENNETT: One question.

CHAIRMAN STEIN: Yes.

MR. BENNETT: How do you get a transcript of the meeting?

CHAIRMAN STEIN: We have made this transcript here just for the use of the conferees. Now, the philosophy of the present law is such that actually we are dealing in the Federal Government at this stage of the case with the state agencies and the state agencies invite other folks as part of their representatives. Now, under this law our obligation is to provide transcripts and summaries to the states. The states will make such distribution as they see fit of these transcripts. Now, I want to make this abundantly clear. I am not being sticky on this point because this law was recently amended. Under the old

law, under enforcement procedures, we, the Federal Government, immediately contacted the individual alleged polluters. When the new Act was passed the philosophy was put forth to the Congress, and accepted by the Congress, that at the initial stage of any of these enforcement proceedings our contact should be with the states and the state agencies rather than the individuals.

So my suggestion is that after the conference has been concluded that you contact your state agency for further information as to material.

MR. BENNETT: Thank you, Mr. Chairman.

(Discussion off the record.)

CHAIRMAN STEIN: There may be one point of clarification here. I think, and Mr. Happy, I am sure, will agree with this, that the four reports that will be made by the Division of Health of Missouri will cover both the industries and the municipalities.

MR. HAPPY: Yes.

CHAIRMAN STEIN: I thought that was understood and I think that the conferees do understand that.

Now, if there is nothing more I should like to call--one more.

MR. SMITH: I would just like to say that anyone here who would like a copy of this transcript, if you will leave your name with us we will be glad to try to furnish you a copy.

CHAIRMAN STEIN: Are there any other comments?

If not, the conference is adjourned. Thank you very much.

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C E R T I F I C A T E

I, VIRGINIA M. HOUGH, do hereby certify that I was present at the time and place first hereinbefore set forth, the aforementioned parties appearing, that I took down in shorthand the proceedings had at said time and place, afterwards transcribed the same, and that the foregoing eighty-five (85) pages constitute a true, correct, and complete transcript of my said shorthand notes.

(Signed) Virginia M. Hough

Table 9. Lower Missouri River Basin - Basic Data on Sources of Municipal Pollution (Revised for St. Joseph, Missouri, Area, May 1957)

Name & Location	River Miles Above Mouth Mo. River	Population Served by Sewers	Pop. Equivalent (BOD) Industrial Wastes to Municipal Sewers	Pop. Equivalent (BOD) Untreated Waste	Waste Treatment Provided	Adequacy of Treatment Facilities Capacity	Oper.	Pop. Equivalent discharged to Watercourse	Project Needs	Current Status Municipal Action
St. Joseph, Mo.	460	65,000	103,500	168,500	None	-	-	168,500	New Plant	Bond Election proposed

Table 10. Lower Missouri River Basin - Industries Discharging Wastes Directly to Watercourse (Revised for St. Joseph, Missouri, Area, May 1957)

Name & Location	River Miles Above Mouth Mo. River	Type of Industry	Type of Waste Produced	Population Equivalent Untreated	Treatment or other Pollution Control Measures Degree	Adequacy Capacity	Adequacy Operation	Pop. Equivalent discharged to Watercourse	Project Needs or Equivalent Control Measures	Current Status Industrial Action
Consumers Coop. St. Joseph	460	chemical Products	Organic and inorganic	-	None	-	-	-	New Plant	Inactive
Armour & Company St. Joseph	460	Food Products	Organic	229,200	None	-	-	229,200	New Plant	Connect to City Planned
Swift & Company St. Joseph	460	Food Products	Organic	165,000	None	-	-	165,000	New Plant	Connect to City Planned
Anchor Serum Co. St. Joseph	460	Drug Products	Organic	16,600	None	-	-	16,600	New Plant	Connect to City Planned
Lederle Laboratories St. Joseph	460	Drug Products	Organic	66,400	None	-	-	66,400	New Plant	Connect to City Planned

Exhibit MC 1

A

Table 9., Lower Missouri River Basin - Basic Data on Sources of Municipal Pollution (Revi

Name & Location	River Miles Above Mouth Mo. River	Population Served by Sewers	Pop. Equivalent (BOD) Industrial Wastes to Municipal Sewers	Pop. Equivalent (BOD) Untreated Waste	Waste Treatment Provided	Adequ Trea Faci Capaci
St. Joseph, Mo.	460	65,000	103,500	168,500	None	-

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Consumers Coop. St. Joseph	460	chemical Products	Organic and inorganic	-	None	-
Armour & Company St. Joseph	460	Food Products	Organic	229,200	None	-
Swift & Company St. Joseph	460	Food Products	Organic	165,000	None	-
Anchor Serum Co. St. Joseph	460	Drug Products	Organic	16,600	None	-
Lederle Laboratories St. Joseph	460	Drug Products	Organic	66,400	None	-

...te on Sources of Municipal Pollution (Revised for St. Joseph, Missouri, Area, May 1957)

B

...ivalent ...dustrial ...e to ...l Sewers	Pop. Equivalent (BOD) Untreated Waste	Waste Treatment Provided	Adequacy of Treatment Facilities Capacity	Oper.	Pop. Equivalent discharged to Watercourse	Project Needs	Current Status Municipal Action
...00	168,500	None	-	-	168,500	New Plant	Bond Election proposed

...s Discharging Wastes Directly to Watercourse (Revised for St. Joseph, Missouri, Area, May 1957)

...aste ...ed	Population Equivalent Untreated	Treatment or other Pollution Control Measures Degree	Adequacy Capacity	Operation	Pop. Equivalent discharged to Watercourse	Project Needs or Equivalent Control Measures	Current Status Industrial Action
...nd ...c	-	None	-	-	-	New Plant	Inactive
	229,200	None	-	-	229,200	New Plant	Connect to City Planned
	165,000	None	-	-	165,000	New Plant	Connect to City Planned
	16,600	None	-	-	16,600	New Plant	Connect to City Planned
	66,400	None	-	-	66,400	New Plant	Connect to City Planned

Exhibit MC 1

POLLUTION CONTROL

ONE PHASE OF MISSOURI BASIN DEVELOPMENT PROGRAM

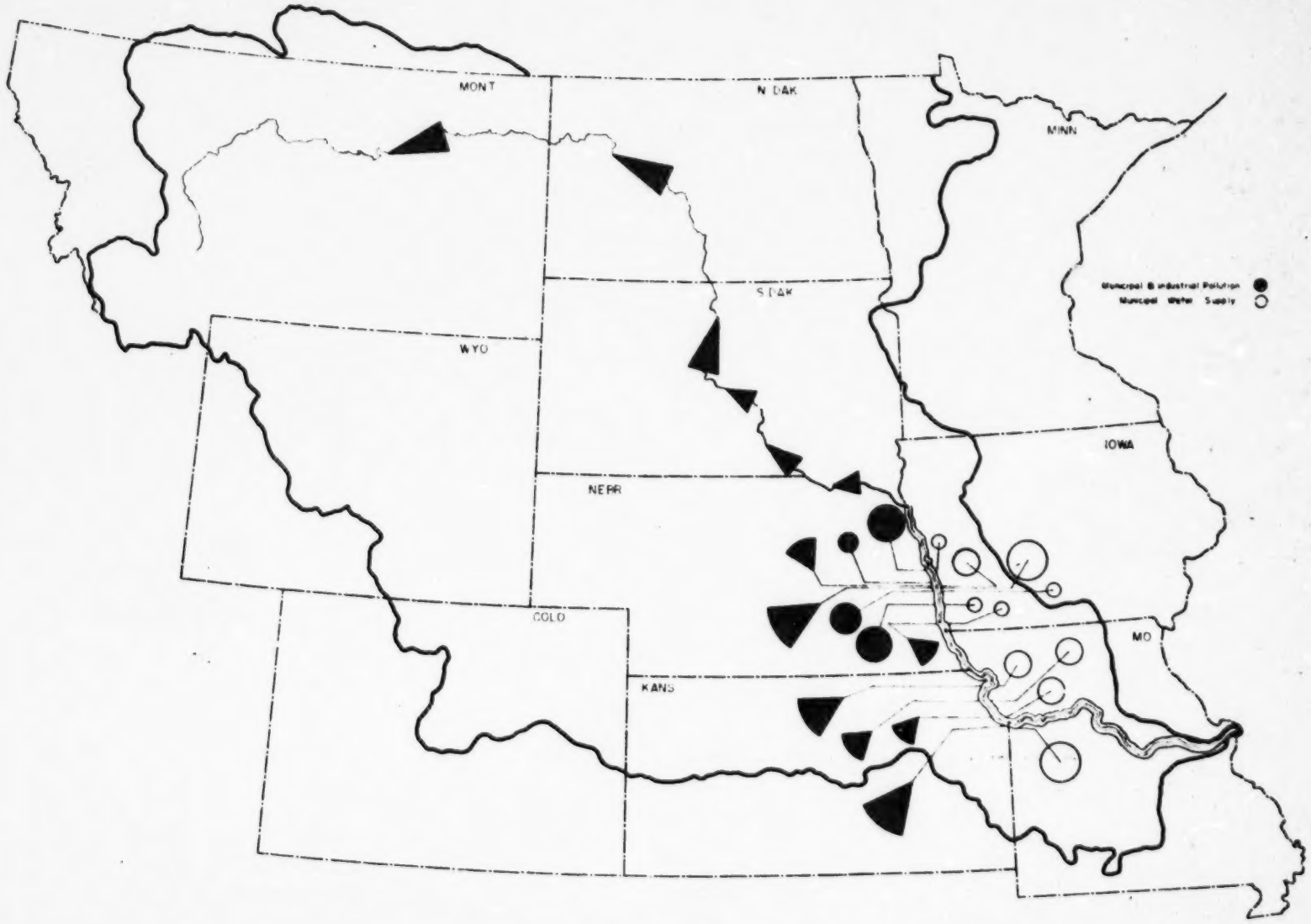
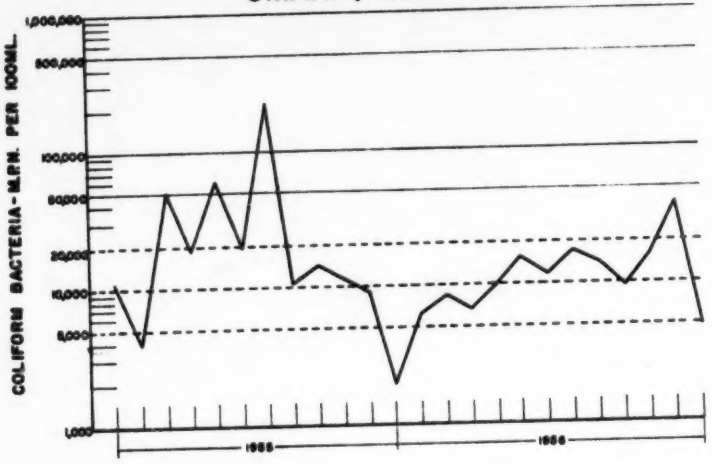


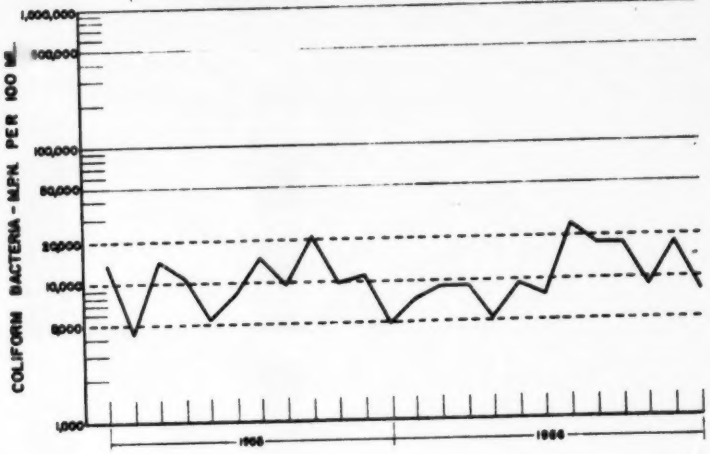
CHART II

BACTERIOLOGICAL POLLUTION CRITICAL DURING SUMMER MONTHS

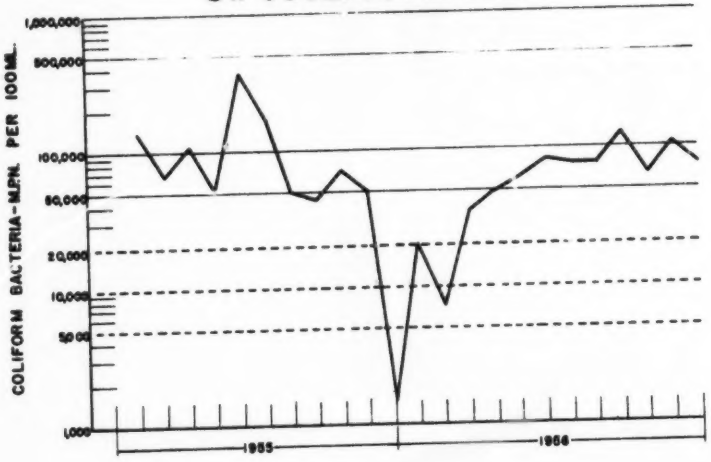
OMAHA, NEBRASKA



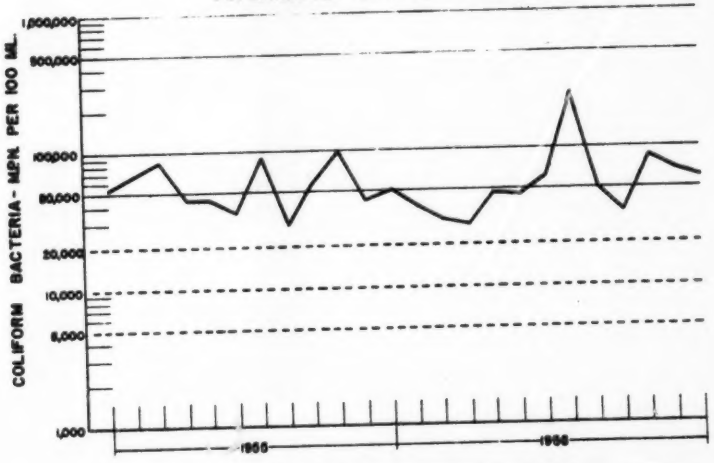
COUNCIL BLUFFS, IOWA



ST. JOSEPH, MISSOURI



KANSAS CITY, KANSAS

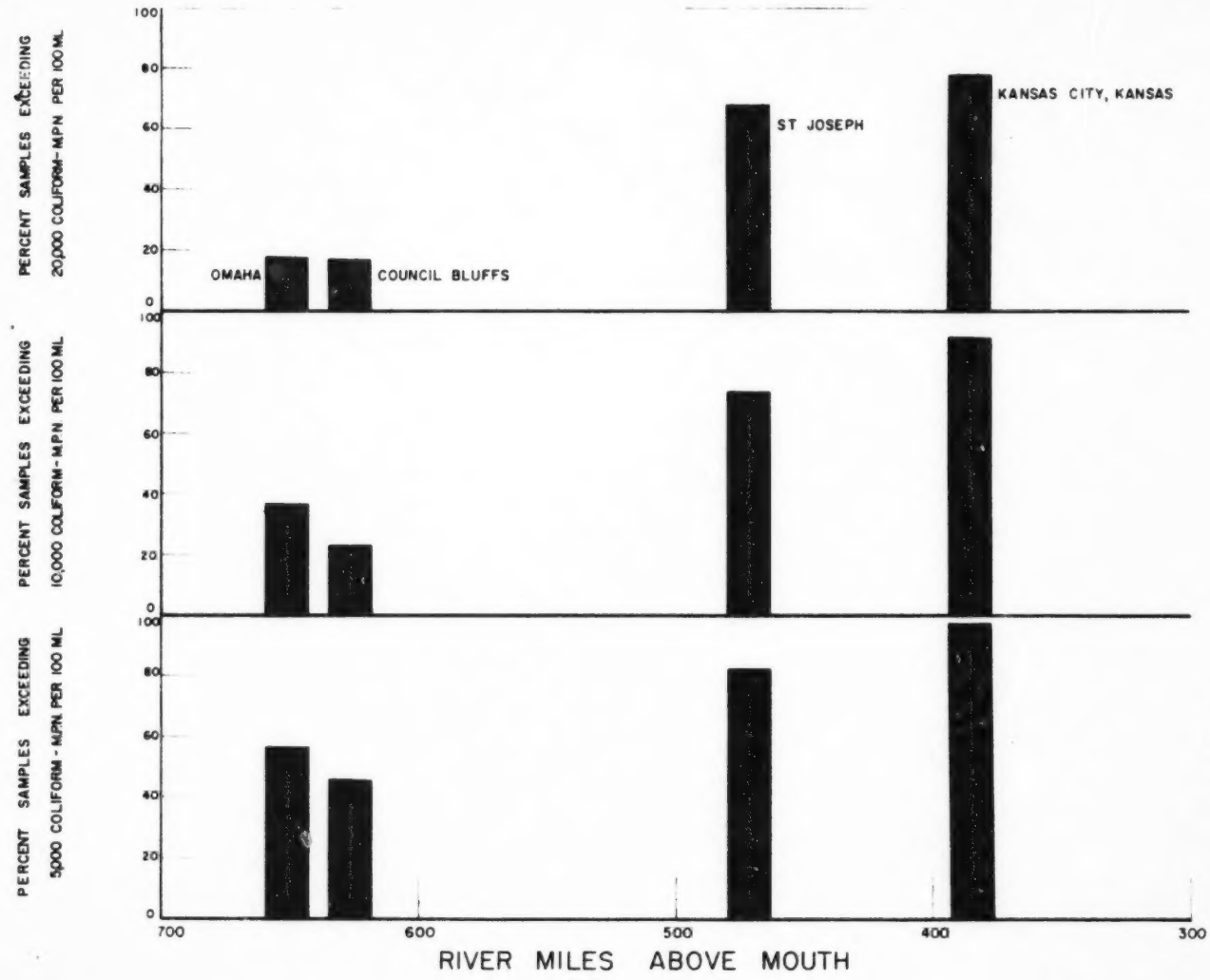


MISSOURI RIVER WATER QUALITY SURVEY
BACTERIOLOGICAL INVESTIGATIONS
AT CITY WATER INTAKES
AVERAGE MONTHLY COLIFORM DENSITIES

-45-

CHART III

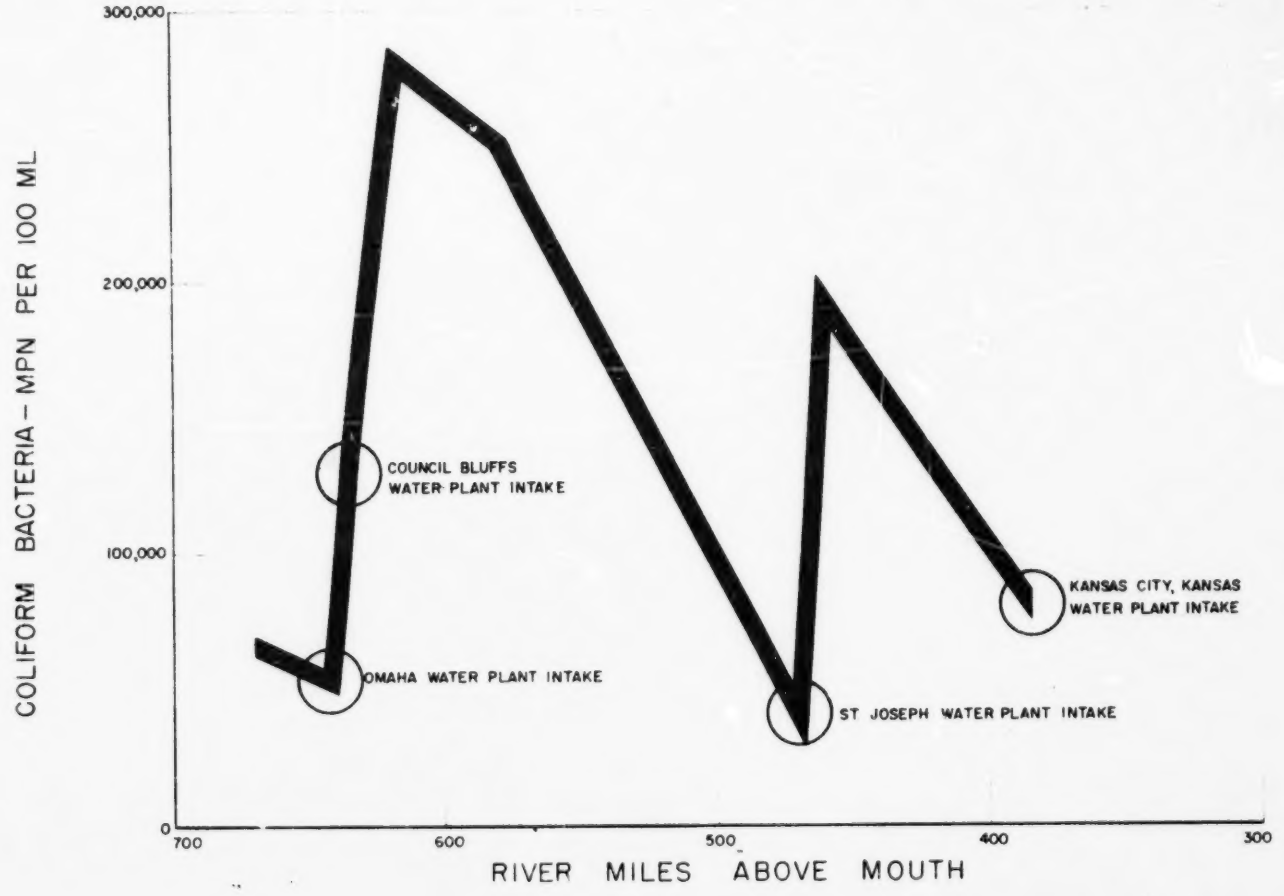
A HIGH PERCENT OF SAMPLES CONTAIN COLIFORMS EXCEEDING ACCEPTABLE LEVELS



MISSOURI RIVER WATER QUALITY SURVEY
BACTERIOLOGICAL INVESTIGATIONS
1955 – 1956

CHART IV

POLLUTION LEAST INTENSE AT WATER PLANTS



MISSOURI RIVER WATER QUALITY
BACTERIOLOGICAL INVESTIGATIONS

AVERAGE COLIFORM DENSITIES
JUNE – SEPT, 1950